1ST PRINTING JUNE '03

www.seuservice.com

SEGA®

WaveRunner™ GP

STD Version

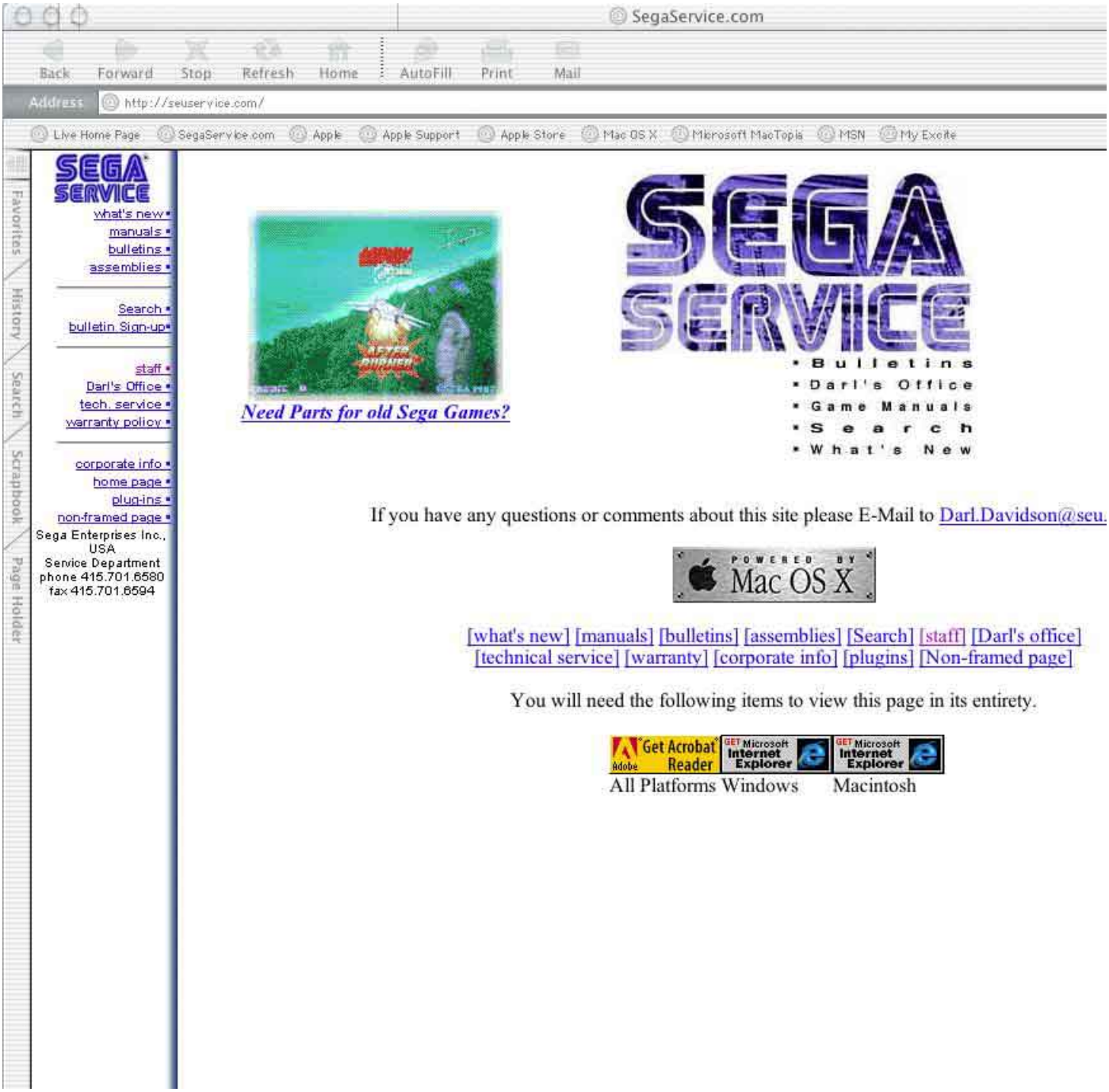
Owner's Manual

SEGA ENTERPRISES, INC. USA

MANUAL NO. 999-1869

Game Code: WRG

VISIT OUR WEBSITE!



BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:

To maintain the safety:

To ensure the safe usage of the product, be sure to read the following before using the product. The following instructions are intended for the users, operators and the personnel in charge of the operation of the product. After carefully reading and sufficiently understanding the warning displays and cautions, handle the product appropriately. Be sure to keep this manual nearby the product or elsewhere convenient for referring to it when necessary.

Herein, explanations which require special attention are enclosed with dual lines. Depending on the potentially hazardous degrees, the terms of WARNING, CAUTION, etc. are used. Be sure to understand the contents of the displays before reading the text.

Indicates that mishandling the product by disregarding this warning will cause a potentially hazardous situation which can result in death or serious injury.

Indicates that mishandling the product by disregarding this caution will cause a slight hazardous situation which can result in personal injury and or material damage.

For the safe usage of the product, the following pictographs are used:

Indicates "HANDLE WITH CARE." In order to protect the human body an equipment, this display is attached to places where the Owner's Manual and or Service Manual should be referred to.

- **Perform work in accordance with the instructions herein stated.**
  Instructions for work are explained by paying attention to the aspect of accident prevention. Failing to perform work as per the instructions can cause accidents. In the case where only those who have technical expertise should perform the work to avoid hazardous situation, the instructions herein state that the serviceman should perform such work.

- **Be sure to turn off power before working on the machine.**
  To prevent electric shock, be sure to turn off power before starting the work in which the worker touches the interior of the product. If the work is to be performed in the power-on status, the Instruction Manual herein always states to that effect.

- **Be sure to ground the Earth Terminal** (this, however, is not required in the case where a power cord with earth is used).
  This product is equipped with the Earth Terminal. When installing the product, Connect the Earth Terminal to the "accurately grounded indoor earth terminal" by using an earth wire. Unless the product is grounded appropriately, the user can be subject to electric shock. After performing repair, etc. for the Control equipment, ensure that the Earth Wire is firmly connected to the Control equipment.

- **Ensure that the Power Supply used is equipped with an Earth Leakage Breaker.**
  This product does not incorporate the Earth Leakage Breaker. Using a power supply which is not equipped with the Earth Leakage Breaker can cause a fire when earth leakage occurs.

- **Be sure to use fuses which meet the specified rating.** (only for the machines which use fuses).
  Using fuses exceeding the specified rating can cause a fire and electric shock.

- **Specification changes (removal of equipment, conversion and addition) not designated by SEGA are not allowed.**
  The parts of the product include warning labels for safety, covers for personal protection, etc. It is very hazardous to operate the product by removing parts and or modifying the circuits. Should doors, lids and protective parts be damaged or lost, refrain from operating the product, and contact where the product was purchased from or the office herein stated. SEGA shall not be held responsible for any accidents, compensation for damage to a third party, resulting from the specifications not designated by SEGA.
- **Ensure that the product meets the requirements of appropriate Electrical Specifications.**
  Before installing the product, check for Electrical Specifications. SEGA products have a nameplate on which Electrical Specifications are described. Ensure that the product is compatible with the power supply voltage and frequency requirements of the location. Using any Electrical Specifications different from the designated Specifications can cause a fire and electric shock.
- **Install and operate the product in places where appropriate lighting is available, allowing warning labels to be clearly read.**
  To ensure safety for the customers, labels and printed instructions describing potentially hazardous situation are applied to places where accidents can be caused. Ensure that where the product is operated has sufficient lighting allowing the warnings to be read. If any label is peeled off, apply it again immediately. Please place an order with where the product was purchased from or the office herein stated.
- **When handling the Monitor, be very careful. (Applies only to the product w/monitor.)**
  Some of the monitor (TV) parts are subject to high tension voltage. Even after running off power, some portions are still subject to high tension voltage sometimes. Monitor repair and replacement should be performed only be those technical personnel who have knowledge of electricity and technical expertise.
- **Be sure to adjust the monitor (projector) properly. (Applies only to the product w/monitor.)**
  Do not operate the product leaving on-screen flickering or blurring as it is. Using the product with the monitor not properly adjusted may cause dizziness or a headache to an operator, a player, or the customers.
- **When transporting or reselling this product, be sure to attach this manual to the product.**
  In the case where commercially available monitors and printers are used in this product, only the contents relating to this product are explained herein. Some commercially available equipment has functions and reactions not stated in this manual. Read this manual together with the specific Instruction Manual of such equipment.

- Descriptions herein contained may be subject to improvement changes without notice.
- The contents described herein are fully prepared with due care. However, should any question arise or errors be found, please contact SEGA.

INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION.

Normally, at the time of shipment, SEGA products are in a status allowing for usage immediately after transporting to the location. Nevertheless, an irregular situation may occur during transportation. Before turning on power, check the following points to ensure that the product has been transported in a satisfactory status.

- ☐ Are there any dented portions or defects (cuts, etc.) on the external surfaces of the cabinet?
- ☐ Are Casters and Adjusters, damaged?
- ☐ Do the power supply voltage and frequency requirements meet with those of the location?
- ☐ Are all wiring connectors correctly and securely connected? Unless connected in the correct direction, connector connections can not be made accurately. Do not insert connectors forcibly.
- ☐ Do power cords have cuts and dents?
- ☐ Do the fuses used meet specified rating? Is the Circuit Protector in an energized status?
- ☐ Are all accessories available?
- ☐ Can all Doors and Lids be opened with the Accessory keys? Can Doors and Lids be firmly closed?

TABLE OF CONTENTS

BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:
TABLE OF CONTENTS
INTRODUCTION OF THE OWNER'S MANUAL
1. HANDLING PRECAUTIONS ..... 1 - 2
2. PRECAUTIONS CONCERNING INSTALLATION LOCATION ..... 3 - 4
3. OPERATION ..... 5 - 7
4. NAME OF PARTS 8
5. ACCESSORIES ..... 9 - 10
6. ASSEMBLING AND INSTALLATION ..... 11 - 18
7. PRECAUTIONS TO BE HEEDED WHEN MOVING THE MACHINE ..... 19 - 20
8. CONTENTS OF GAME ..... 21 - 25
9. EXPLANATION OF TEST AND DATA DISPLAY ..... 26 - 43
10. COIN SELECTOR ..... 44 - 45
11. MONITOR ..... 46 - 47
12. PERIODIC INSPECTION TABLE 48
13. TROUBLESHOOTING ..... 49 - 52
14. GAME BOARD ..... 53 - 54
15. DESIGN RELATED PARTS 55
16. COMMUNICATION PLAY ..... 56 - 60
17. PARTS ..... 61 - 64
17. WIRE COLOR CODE TABLE 65
18. WIRING DIAGRAM XXX

SPECIFICATIONS

Installation Space	: 38.25 inches wide X 84.5 inches deep
Height	: 77.5 inches
Width	: 30.25 inches
Length	: 76.5 inches
Weight	: 550 lbs
Power, maximum current	: 420 W 3.5 A (AC 120V 60 Hz AREA)
MONITOR	: 29 inch supplied by Wells Gardner model #wgm-2972XX

INTRODUCTION OF THE OWNERS MANUAL

This Owner's Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards the product,
WAVERUNNER GP STANDARD VERSION.
This manual is intended for the owners, personnel and managers in charge of operation of the product. Operate the product after carefully reading and sufficiently understanding the instructions. If the product fails to function satisfactorily, non-technical personnel should under no circumstances touch the internal system. Please contact where the product was purchased from.

Use of this product is unlikely to cause physical injuries or damages to property. However, where special attention is required this is indicated by a thick line, the word "IMPORTANT" and its sign in this manual.

Indicates that mishandling the product by disregarding this display can cause the product's intrinsic performance not to be obtained, resulting in malfunctioning.

SEGA AMUSEMENTS USA, INC./CUSTOMER SERVICE
45133 Industrial Drive, Fremont, California 94538, U.S.A.
Phone : (415) 701-6580
Fax : (415) 701-6594

DEFINITION OF LOCATION MAINTENANCE MAN AND SERVICEMAN

WARNING!

Non-technical personnel who do not have technical knowledge and expertise should refrain from performing such work that this manual requires the location's maintenance man or a serviceman to carry out, or work which is not explained in this manual. Failing to comply with this instruction can cause a severe accident such as electric shock.

Ensure that parts replacement, servicing & inspections, and troubleshooting are performed by the location's maintenance man or the serviceman. It is instructed herein that particularly hazardous work should be performed by the serviceman who has technical expertise and knowledge.

The location's maintenance man and serviceman are herein defined as follows:

"Location's Maintenance Man" :
Those who have experience in the maintenance of amusement equipment and vending machines, etc., and also participate in the servicing and control of the equipment through such routine work as equipment assembly and installation, servicing and inspections, replacement of units and consumables, etc. within the Amusement Facilities and or locations under the management of the Owner and Owner's Operators of the product.

Activities of Location's Maintenance Man :
Assembly & installation, servicing & inspections, and replacement of units & consumables as regards amusement equipment, vending machines, etc.

Serviceman :
Those who participate in the designing, manufacturing, inspections and maintenance service of the equipment at an amusement equipment manufacturer.
Those who have technical expertise equivalent to that of technical high school graduates as regards electricity, electronics and or mechanical engineering, and daily take part in the servicing & control and repair of amusement equipment.

Serviceman's Activities :
Assembly & installation and repair & adjustments of electrical, electronic and mechanical parts of amusement equipment and vending machines.

LISTED

UL®

5K92

AMUSEMENT MACHINE

NOTES:

1. HANDLING PRECAUTIONS

When installing or inspecting the machine, be very careful of the following points and pay attention to ensure that the player can enjoy the game safely.
Non-compliance with the following points or inappropriate handling running counter to the cautionary matters herein stated can cause personal injury or damage to the machine.

- Before performing work, be sure to turn power off. Performing the work without turning power off can cause an electric shock or short circuit. In the case work should be performed in the status of power on, this manual always states to that effect.
- To avoid electric shock or short circuit, do not plug in or unplug quickly.
- To avoid electric shock, do not plug in or unplug with a wet hand.
- Do not expose Power Cords and Earth Wires on the surface, (floor, passage, etc.). If exposed, the Power Cords and Earth Wires are susceptible to damage.
- Damaged cords and wires can cause electric shock or short circuit.
  To avoid causing a fire or electric shock, do not put things on or damage Power Cords.
- When or after installing the product, do not unnecessarily pull the power cord.
  If damaged, the power cord can cause a fire or electric shock.
  In case the power cord is damaged, ask for replacement through where the product was purchased from or the office herein stated. Using the cord as is damaged can cause fire, electric shock or leakage.
- Be sure to perform grounding appropriately. Inappropriate grounding can cause an electric shock.
- Be sure to use fuses meeting specified rating. Using fuses exceeding the specified rating can cause a fire or electric shock.
- Completely make connector connections for IC BD and others. Insufficient insertion can cause an electric shock.
- Specification changes, removal of equipment, conversion and/or addition, not designated by SEGA are not permitted.
- Failure to observe this may cause a fire or an electric shock. Non-compliance with this instruction can have a bad influence upon physical conditions of the players or the lookers-on, or result in injury during play.
- SEGA shall not be held responsible for damage, compensation for damage to a third party, caused by specification changes not designated by SEGA.
  Be sure to perform periodic maintenance inspections herein stated.

www.seuservice.com

STOP
IMPORTANT!

For the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.
The Projector is employed for this machine. The Projector's screen is susceptible to damage, therefore, be very careful when cleaning the screen. For details, refer to PROJECTOR.
Some parts are the ones designed and manufactured not specifically for this game machine. The manufacturers may discontinue, or change the specifications of, such general-purpose parts. If this is the case, Sega cannot repair or replace a failed game machine whether or not a warranty period has expired.

2. PRECAUTIONS CONCERNING INSTALLATION LOCATION

This product is an indoor game machine. Do not install it outside. Even indoors, avoid installing in places mentioned below so as not to cause a fire, electric shock, injury and or malfunctioning.

Places subject to rain or water leakage, or places subject to high humidity in the proximity of an indoor swimming pool and or shower, etc.

Places subject to direct sunlight, or places subject to high temperatures in the proximity of heating units, etc.

Places filled with inflammable gas or vicinity of highly inflammable/volatile chemicals or hazardous matter.

Dusty places.

Sloped surfaces.

Places subject to any type of violent impact.

Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.

The operating (ambient) temperature range is from 5˚ to 30˚.

LIMITATIONS OF USAGE REQUIREMENTS

Be sure to check the Electrical Specifications.

Ensure that this product is compatible with the location's power supply, voltage and frequency requirements.

A plate describing Electrical Specifications is attached to the product.

Non-compliance with the Electrical Specifications can cause a fire and electric shock.

This product requires the Breaker and Earth Mechanisms as part of the location facilities. Using them in a manner not independent can cause a fire and electric shock.

Ensure that the indoor wiring for the power supply is rated at 15A or higher (AC single phase 100 ~ 120V area), and 8A or higher (AC 220 ~ 240V area). Non-compliance with the Electrical Specifications can cause a fire and electric shock.

Be sure to independently use the power supply equipped with the Earth Leakage Breaker. Using a power supply without the Earth Leakage Breaker can cause an outbreak of fire when earth leakage occurs.

Putting many loads on one electrical outlet can cause generation of heat and a fire resulting from overload.

When using an extension cord, ensure that the cord is rated at 15A or higher (AC 100 ~ 120V area) and 8A or higher (AC 220 ~ 240V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.

OPERATION AREA

WARNING!

For the operation of this machine, secure a minimum area of 40in (W) X 85in (D). In order to prevent injury resulting from the falling down accident during game play, be sure to secure the minimum area for operation.
Be sure to provide sufficient space so as to allow this product's ventilation fan to function efficiently. To avoid machine malfunctioning and a fire, do not place any obstacles near the ventilation opening.
SEGA shall not be held responsible for damage, compensation for damage to a third party, resulting from the failure to observe this instruction.

STOP
IMPORTANT!

For transporting the machine into the location's building, the minimum necessary dimensions of the opening (of doors, etc.) are 31in (W) and 78in (H).

Electric current consumption

MAX. 5 A (AC 120V 60 Hz)

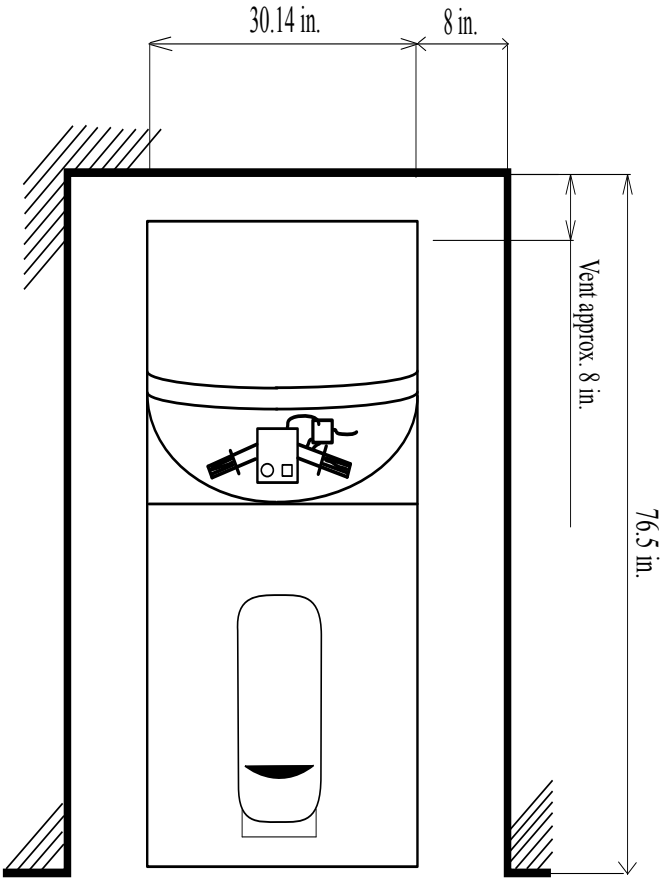


FIG. 2

3. OPERATION

PRECAUTIONS TO BE HEEDED BEFORE STARTING THE OPERATION

To avoid injury and trouble, be sure to constantly give careful attention to the behavior and manner of the visitors and players.

WARNING!

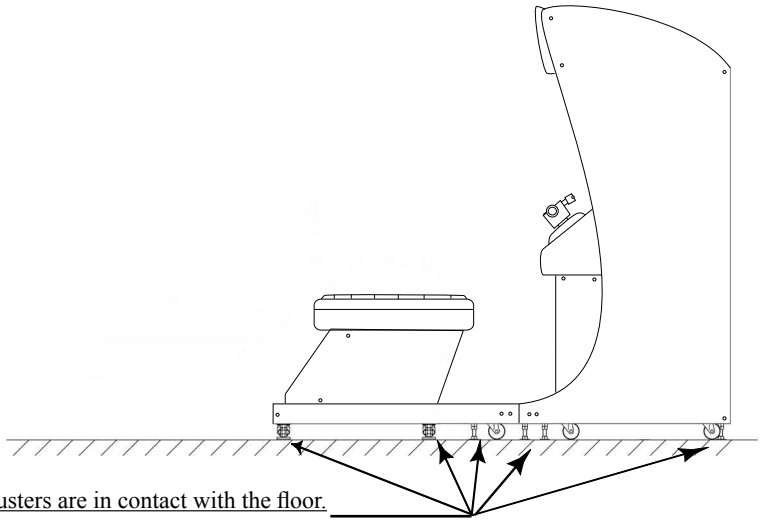
In order to avoid accidents, check the following before starting the operation:

To ensure maximum safety for the players and the customers, ensure that where the product is operated has sufficient lighting to allow any warnings to be read. Operation under insufficient lighting can cause bodily contact with each other, hitting accident, and or trouble between customers.

Be sure to perform appropriate adjustment of the monitor (projector). For operation of this machine, do not leave monitor's flickering or deviation as is. Failure to observe this can have a bad influence upon the players' or the customers' physical conditions.

It is suggested to ensure a space allowing the players who feel sick while playing the game to take a rest.

Check if all of the adjusters are in contact with the surface. If they are not, the Cabinet can move and cause an accident.



Ensure that all of the Adjusters are in contact with the floor.

www.seuservice.com

Do not put any heavy item on this product. Placing any heavy item on the product can cause a falling down accident or parts damage.
Do not climb on the product. Climbing on the product can cause falling down accidents. To check the top portion of the product, use a step.
To avoid electric shock, check to see if door & cover parts are damaged or omitted.
To avoid electric shock, short circuit and or parts damage, do not put the following items on or in the periphery of the product.
Flower vases, flowerpots, cups, water tanks, cosmetics, and receptacles/containers/vessels containing chemicals and water.

To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause making bodily contact with each other, hitting accidents, and or trouble between customers.

PRECAUTIONS TO BE HEEDED DURING OPERATION (PAYING ATTENTION TO CUSTOMERS)

To avoid injury and trouble, be sure to constantly give careful attention to the behavior and manner of the visitors and players.

WARNING!

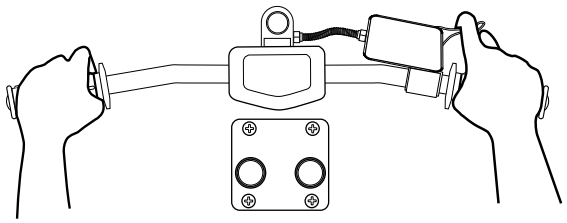
To avoid injury and accidents, those who fall under the following categories are not allowed to play the game.

- Those who need assistance such as the use of an apparatus when walking.
- Those who have high blood pressure or a heart problem.
- Those who have experienced muscle convulsion or loss of consciousness when playing video game, etc.
- Those who have a trouble in the neck and or spinal cord.
- Intoxicated persons.
- Pregnant women or those who are in the likelihood of pregnancy.
- Persons susceptible to motion sickness.
- Persons whose act runs counter to the product's warning displays.

A player who has never been adversely affected by light stimulus might experience dizziness or headache depending on his physical condition when playing the game. Especially, small children can be subject to those conditions. Caution guardians of small children to keep watch on their children during play.
Instruct those who feel sick during play to have a medical examination.
To avoid electric shock and short circuit, do not allow customers to put hands and fingers or extraneous matter in the openings of the product or small openings in or around the doors.
To avoid falling down and injury resulting from falling down, immediately stop the customer's leaning against or climbing on the product, etc.
To avoid electric shock and short circuit, do not allow the customers to unplug the power plug without a justifiable reason.

WARNING!

Instruct the player to take a firm grip of the handle Bars during play. This machine reacts as per the contents of the game. To avoid injury, instruct the players to refrain from single-handed taking grip of the handle Bar (which is very likely to cause potentially hazardous situation, should he attempt to do so).



CAUTION!

Immediately stop such violent acts as hitting and kicking the product. Such violent acts can cause parts damage or falling down, resulting in injury due to fragments and falling down.

4. NAME OF PARTS

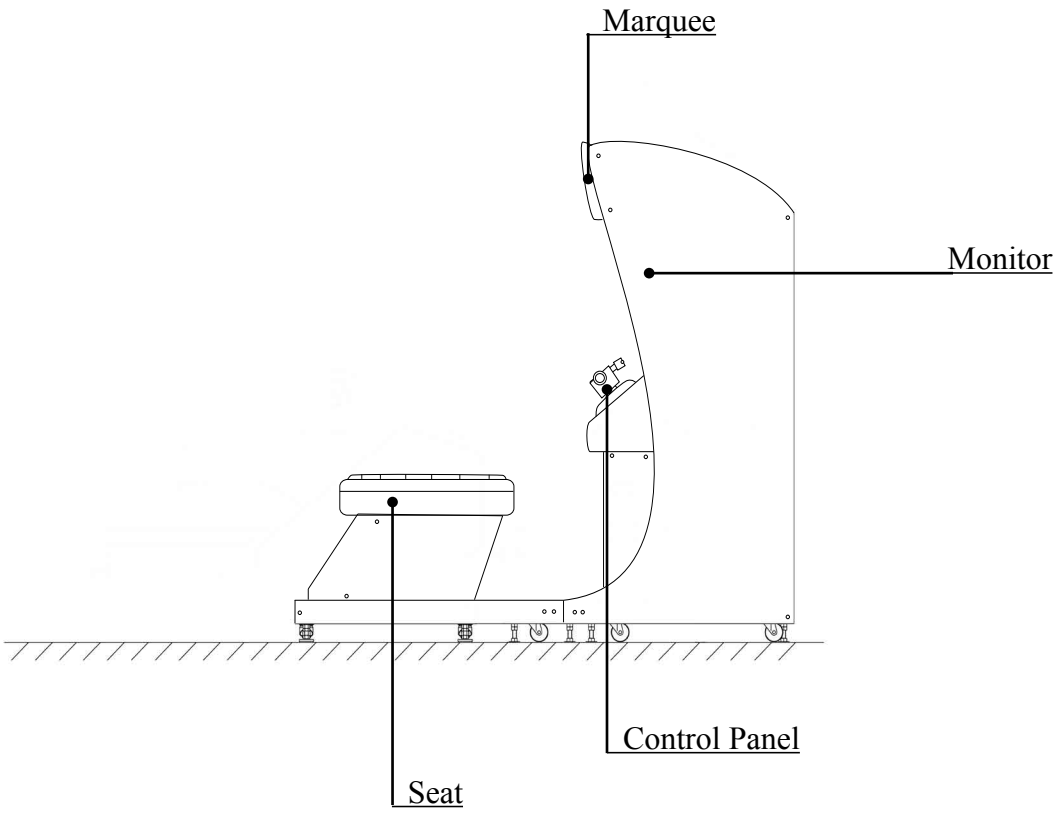


TABLE 4 Dimensions and Weights

Items	Width X Depth X Height	Weight
Cabinet	30.25in (W) X 35.75in (D) X 77.5in (H)	450 lbs
Seat Section	30.25in (W) X40.75in (D) X 25.25in (H)	100 lbs
When assembled	30.25in (W) X 76.5in (D) X 77.5in (H)	550 lbs

5. ACCESSORIES

When transporting the machine, make sure that the following parts are supplied.

TABLE 5 a ACCESSORIES

DESCRIPTION	OWNERS MANUAL
Part No. (Qty.)	999-XXXX (1)
Note	

Figures

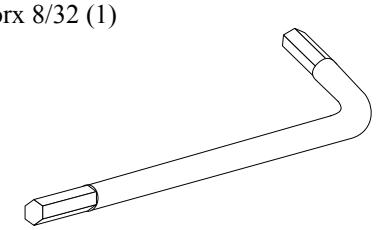
If Part No. has no description, the Number has not been registered or can not be registered. Such a part may not be obtainable even if the customer desires to purchase it. Therefore, ensure that the part is in safekeeping with you.

KEY MASTER
220-5576 (2)
For opening/closing the doors

KEY (2)
For the CASHBOX DOOR
The Keys are inside the Coin Chute Door at the time of shipment from the factory.

SERVICE MANUAL NAOMI ENG
420-6455-01 (1)
INSTRUCTION MANUAL FOR THE GAME BOARD

TAMPERPROOF WRENCH
T-27 Torx 1/4-20 (1)
T-15 Torx 8/32 (1)
Tool



HOW TO USE THE CARTON BOX

STOP
IMPORTANT!

When requesting for the replacement/repair of this product's Game Board (NAOMI BOARD), follow the instructions below. Transporting the Game Board in an undesignated status is unacceptable. An erroneous handling can cause parts damage.

- Put the Game Board in the Carton Box together with the Shield Case. Do not unnecessarily disassemble nor remove parts.
- By paying careful attention to the following Figure and the direction shown by on-Carton-Box printing, put the Shield Case in the Carton Box.
- When putting the Shield Case in the Carton Box, do not remove Leg Brackets.
- The projected portions of the packing material is intended for cushioning. Therefore, do not bend the projected portions.

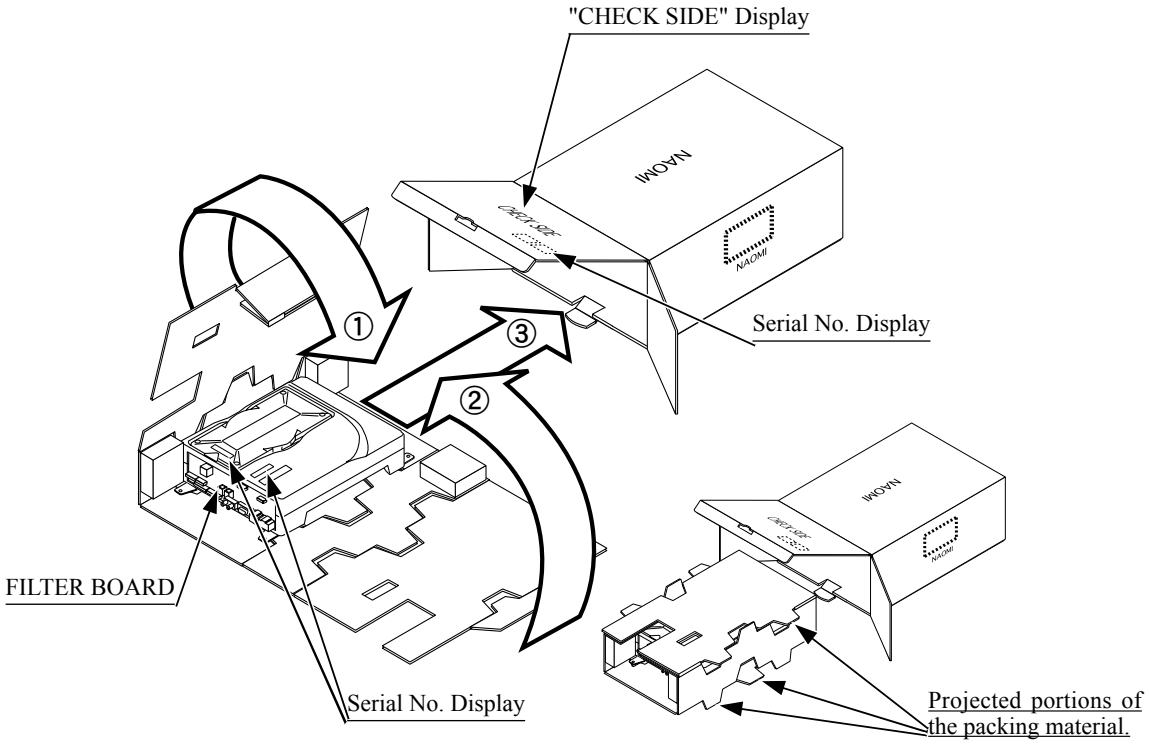


FIG. 5

Bend the packing material in numerical order, and wrap the Shield Case with the packing material and put it in the Carton Box as shown. Putting it upside down or packing otherwise in the manner not shown can damage the Game Board and the parts.

6. ASSEMBLING AND INSTALLATION

WARNING!

Perform assembly work by following the procedure herein stated. Failing to comply with the instructions can cause electric shock hazard.
Perform assembling as per this manual. Since this is a complex machine, erroneous assembling can cause an electric shock, machine damage and or not functioning as per specified performance.
When assembling, be sure to use plural persons. Depending on the assembly work, there are some cases in which working by one person alone can cause personal injury or parts damage.
Ensure that connectors are accurately connected. Incomplete connections can cause electric shock hazard.
Be careful so as not to damage wirings. Damaged wiring can cause electric shock and short circuit hazards.
Do not carelessly push the PTV. Pushing the PTV carelessly can cause the PTV to fall down.
This work should be performed by the Location's Maintenance Man or Serviceman. Performing work by non-technical personnel can cause a severe accident such as electric shock. Failing to comply with this instruction can cause a severe accident such as electric shock to the player during operation.
Provide sufficient space so that assembling can be performed. Performing work in places with narrow space or low ceiling may cause an accident and assembly work to be difficult.
To perform work safely and avoid serious accident such as the cabinet's falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.

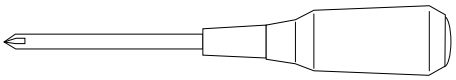
CAUTION!

To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Performing work without using the step can cause violent falling down accidents.

When carrying out the assembling and installation, follow the following 7-item sequence.

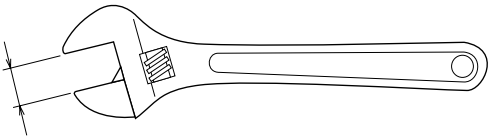
1. SECURING IN PLACE (ADJUSTER ADJUSTMENT)
2. POWER SUPPLY, AND EARTH CONNECTION
3. TURNING POWER ON
4. ASSEMBLY CHECK

Tools required for the work

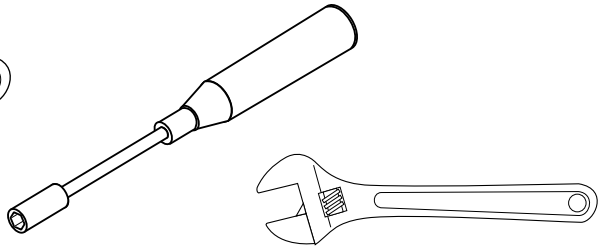


Phillips type screwdriver (for M4, M5 screw)

KEY MASTER



WRENCH (for M16 hexagon bolt)



Box nut screwdriver (for M4 hexagon nut) or WRENCH

1 SECURING IN PLACE (ADJUSTER ADJUSTMENT)

WARNING!

Make sure that all of the adjusters are in contact with the floor. If they are not, the cabinet can move and cause an accident.

This product has 8 casters (4 for FRONT CABINET, 4 for REAR CABINET) and 8 Adjusters (4 for FRONT CABINET, 4 for REAR CABINET). (FIG. 6. 3a) When the installation position is determined, cause the adjusters to come into contact with the floor directly, make adjustments in a manner so that the casters will be raised approximately 5mm from the floor and make sure that the machine position is level.

1. Transport the product to the installation position. Be sure to provide adequate space allowing the player to get on and off.
2. Have all of the Adjusters make contact with the floor. Adjust the Adjuster's height by using a wrench so that the machine position is kept level.
3. After making adjustment, fasten the Adjuster Nut upward and secure the height of Adjuster (FIG. 6. 3 b).

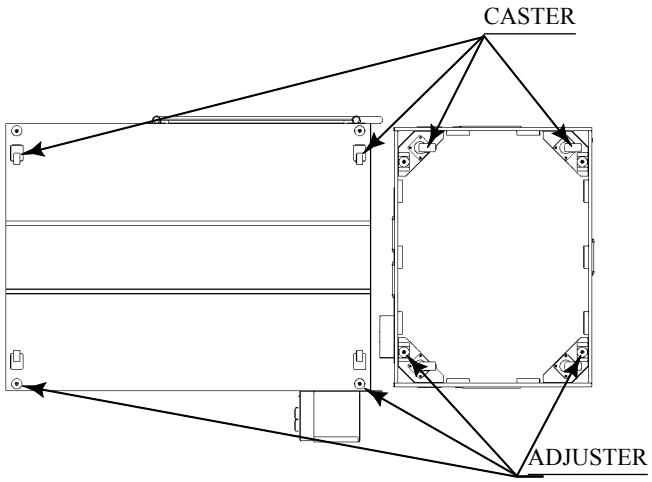


FIG. 6. 3 a BOTTOM VIEW

Note: Actual unit will differ from image.

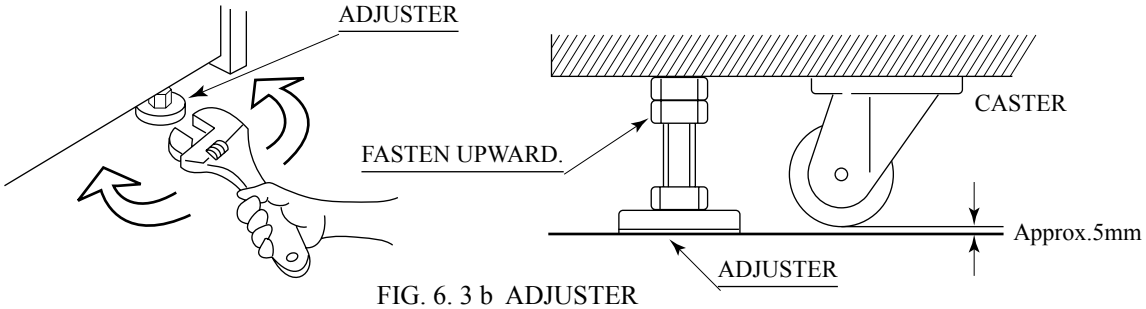


FIG. 6. 3 b ADJUSTER

Note: Actual unit will differ from image.

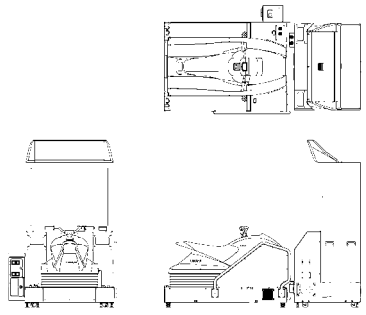


FIG. 6. 3 c

Refer to this Fig. (Scale:1/100) for the layout of the place of installation.

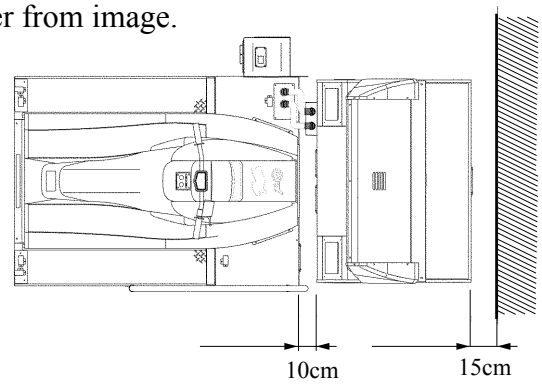


FIG. 6. 3 d

Be sure to provide space as shown between the Air Vent and the wall surface.

2 POWER SUPPLY, AND EARTH CONNECTION

WARNING!

Be sure to independently use the power supply socket outlet equipped with an Earth Leakage Breaker. Using a power supply without an Earth Leakage Breaker can cause a fire when electric leakage occurs.
Ensure that the "accurately grounded indoor earth terminal" and the earth wire cable are available (except in the case where a power cord plug with earth is used). This product is equipped with the earth terminal. Connect the earth terminal and the indoor earth terminal with the prepared cable. If the grounding work is not performed appropriately, customers can be subjected to an electric shock, and the product's functioning may not be stable.
Ensure that the power cord and earth wire are not exposed on the surface (passage, etc.). If exposed, they can be caught and are susceptible to damage. If damaged, the cord and wire can cause electric shock and short circuit accidents. Ensure that the wiring position is not in the customer's passage way or the wiring has protective covering.
After wiring power cord on the floor, be sure to protect the power cord. Exposed power cord is susceptible to damage and causes an electric shock accident.

The AC Unit is mounted on the right side of the machine. The AC Unit has Main SW, Circuit Protector, Earth Terminal and the Inlet which connects the Power Cord.

(1) Ensure that the Main SW is OFF.

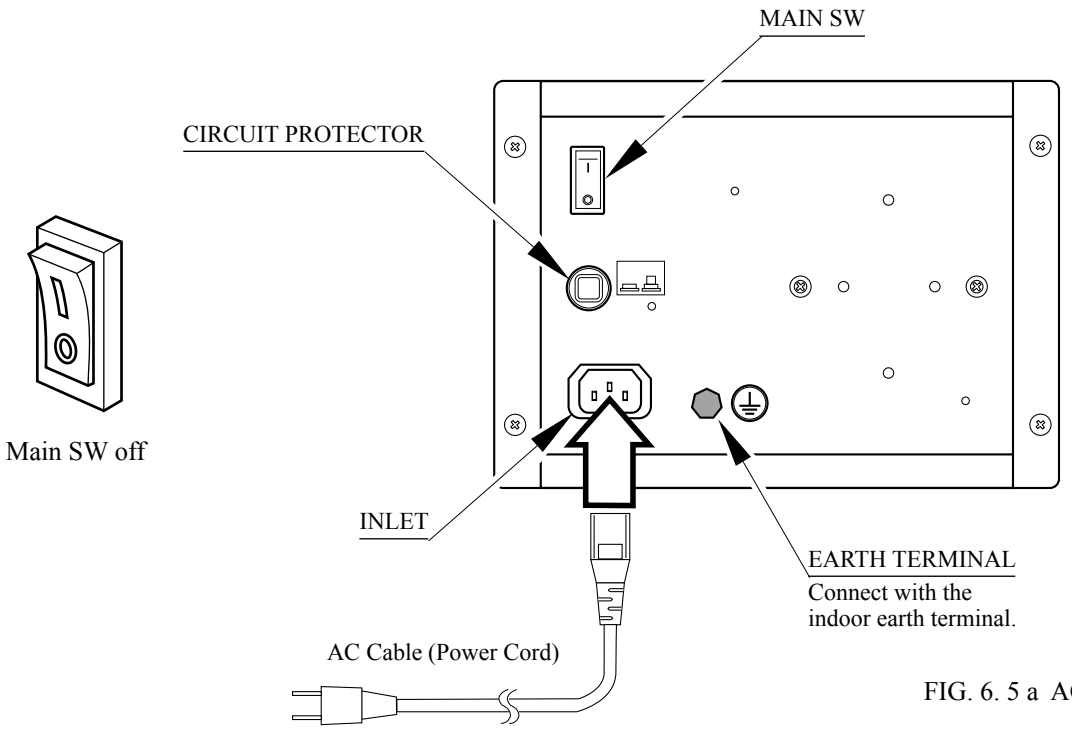


FIG. 6. 5 a AC UNIT

(2) Connect one end of the earth wire to the AC Unit earth terminal, and the other end to the indoor earth terminal. The AC Unit earth terminal has a Bolt and Nut combination. Take off the Nut, pass the end of earth wire through the Bolt, and fasten the Nut.

(3) Note that the Earth Wire is incorporated in the Power Cord for the Areas of AC 120V (USA) and AC 220 ~ 240V, and therefore, this procedure is not necessary.

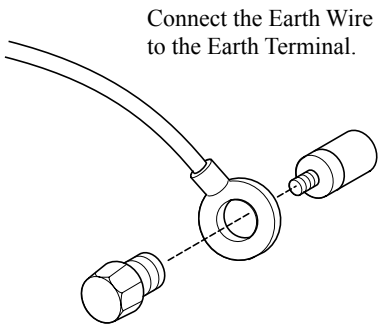


FIG. 6. 5 b Earth Wire Connection

(4) Firmly insert the power plug into the socket outlet.
Insert the opposite side of Power Cord plug to the AC Unit's connector ("INLET").

(5) Perform wiring for the Power Cord and Earth Wire. Install protective covering for the Power Cord and Earth Wire.

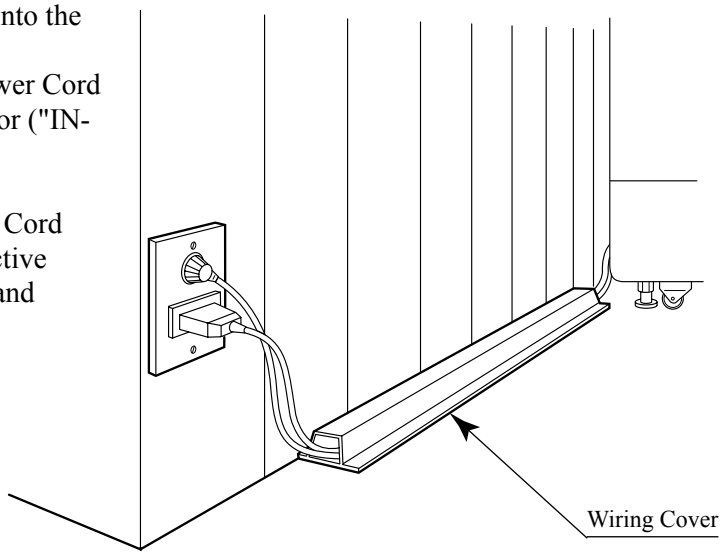
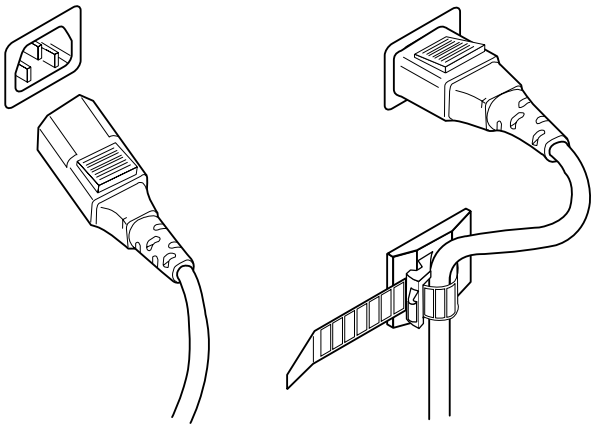


FIG. 6. 5 c Connecting Power Cord and Earth Wire



HOW TO USE THE CORD CLAMP

In case the Power Plug is apt to come out of place, secure the Power Cord to the periphery of the AC Unit with the Cord Clamp (an accessory).

3 TURNING POWER ON

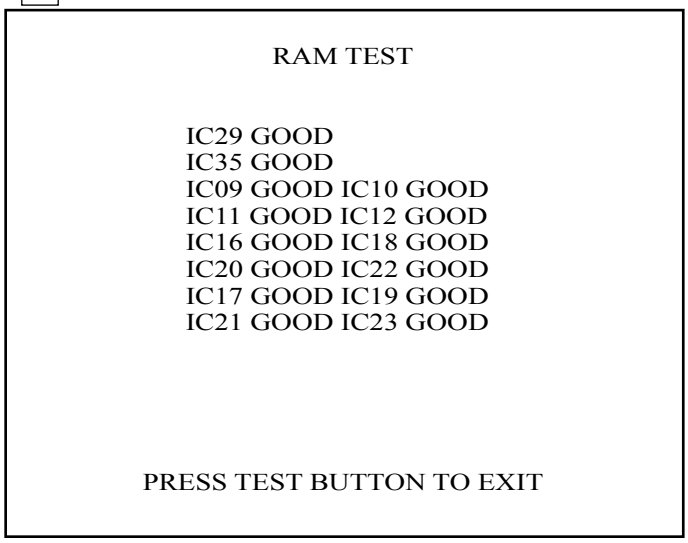
Turn the AC Unit Main SW ON to turn on the machine's power supply. At the same time the power is turned on for the power supply, the machine starts the initialization setting and displays the screen on which the setting is being made. Do not touch the Ride until the initialization setting movements are automatically finished.

After finishing the initialization setting movements, the ADVERTISE mode returns. During the setting movements, if any irregularity, malfunctioning, etc. of the moving mechanism are found, ERROR display is shown on the lower part of the ADVERTISE mode screen. In this case, the machine will not operate satisfactorily. Please contact the Distributor, etc. where this product was purchased from.
In the case where several machines are connected, network check is performed after initialization settings are finished, and the screen displays to the effect that the check is being conducted. After checking, the ADVERTISE mode returns. Normally the network checking takes 1 ~ 3 minutes. If there is any irregularity in the communication connection, check screen display will continue.

4 ASSEMBLY CHECK

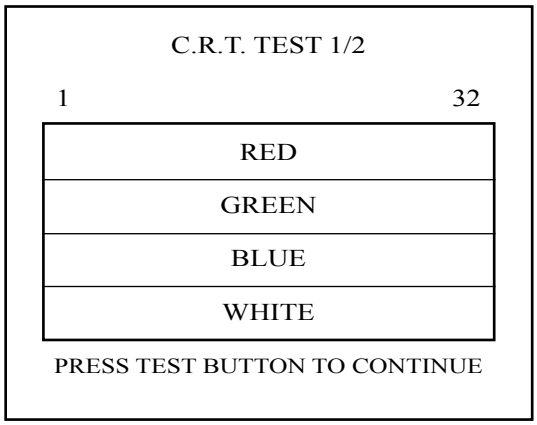
In the TEST MODE, ascertain that the assembly has been made correctly and IC BD is satisfactory (refer to Section 9).
In the test mode, perform the following test:

(1) MEMORY TEST

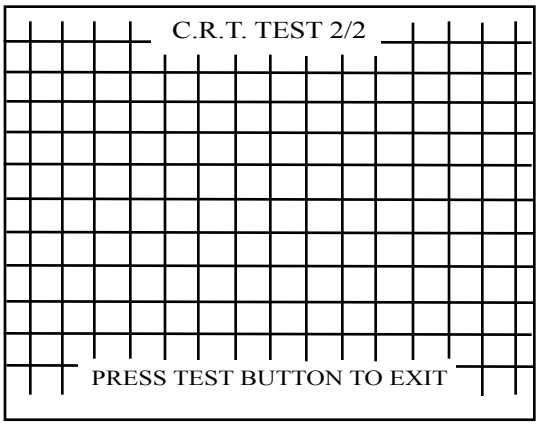


Selecting the RAM TEST in the test mode menu causes the on-board memory to be tested automatically. The game board is satisfactory if the display beside each IC No. shows GOOD.

(2) C.R.T. TEST



In the test mode menu, selecting C.R.T. TEST allows the screen (on which the projector is tested) to be displayed. Although the projector adjustments have been made at the time of shipment from the factory, color deviation, etc., may occur due to the effect caused by geomagnetism, the location building's steel frames and other game machines in the periphery. By watching the test mode screen, make judgment as to whether an adjustment is needed. If it is necessary, adjust the projector by referring to Section 14.



www.seuservice.com

(3) SOUND TEST

SOUND TEST

RIGHT SPEAKER OFF
LEFT SPEAKER OFF
➔ EXIT

SELECT WITH SERVICE BUTTON
AND
PRESS TEST BUTTON

In the test mode, selecting SOUND TEST causes the screen (on which sound related BD and wiring connections are tested) to be displayed.
Be sure to check if the sound is satisfactorily emitted from each speaker and the sound volume is appropriate.

(4) INPUT TEST

INPUT TEST

HANDLE BAR	0H
ROLL	0H
THROTTLE LEVER	FFH
PITCH	0H
START	OFF
VIEW	OFF
SAFETY SENSOR	OFF
SERVICE	OFF
TEST	OFF

PRESS TEST AND SERVICE BUTTON TO EXIT

Selecting the INPUT TEST on the test mode menu screen causes the screen (on which each switch and V. R. are tested) to be displayed. Press each switch. If the display beside each switch indicates "ON," the switch and wiring connections are satisfactory. Check the display of each V.R. value. If the V. R. is malfunctioning, refer to Sections 11 & 12.

(5) OUTPUT TEST

OUTPUT TEST

> START LAMP OFF
VIEW LAMP OFF
EXIT

SELECT WITH SERVICE BUTTON
AND PRESS TEST BUTTON

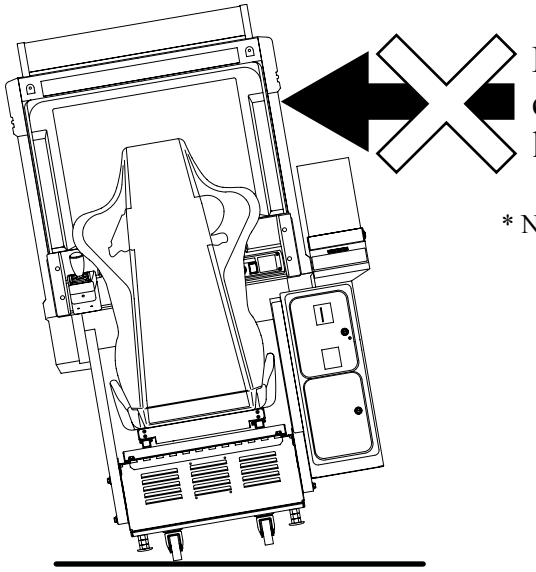
In the output test mode, carry out lamp test to ascertain that each lamp lights up satisfactorily.

Perform the above inspections also at the time of monthly inspection.

7. PRECAUTIONS TO BE HEEDED WHEN MOVING THE MACHINE

WARNING!

When moving the machine, be sure to pull out the plug from the power supply. Moving the machine with the plug as is inserted can cause the power cord to be damaged, resulting in a fire and or electric shock.
When moving the machine on the floor, retract the Adjusters and ensure that Casters make contact with the floor. During transportation, pay careful attention so that Casters do not tread power cords and earth wires. Damaging the power cords can cause an electric shock and or short circuit.
In places where step-like grade differences exist, be sure to separate the Base, and the Cabinet. Inclining the Base can cause the Cabinet to fall off from the Base and result in injury.
When lifting the cabinet, be sure to hold the catch portions or bottom part. Lifting the cabinet by holding other portions can damage parts and installation portions due to the empty weight of the cabinet, and cause personal injury.
When moving the unit, do not push it from the rear side. Push it from sideways.



Do not push the cabinet from the left/right direction.

* Note: Image differs from actual Unit.

FIG. 8 a

When transporting the product in places with steps or step-like differences in grade, disassemble into each unit before transporting.

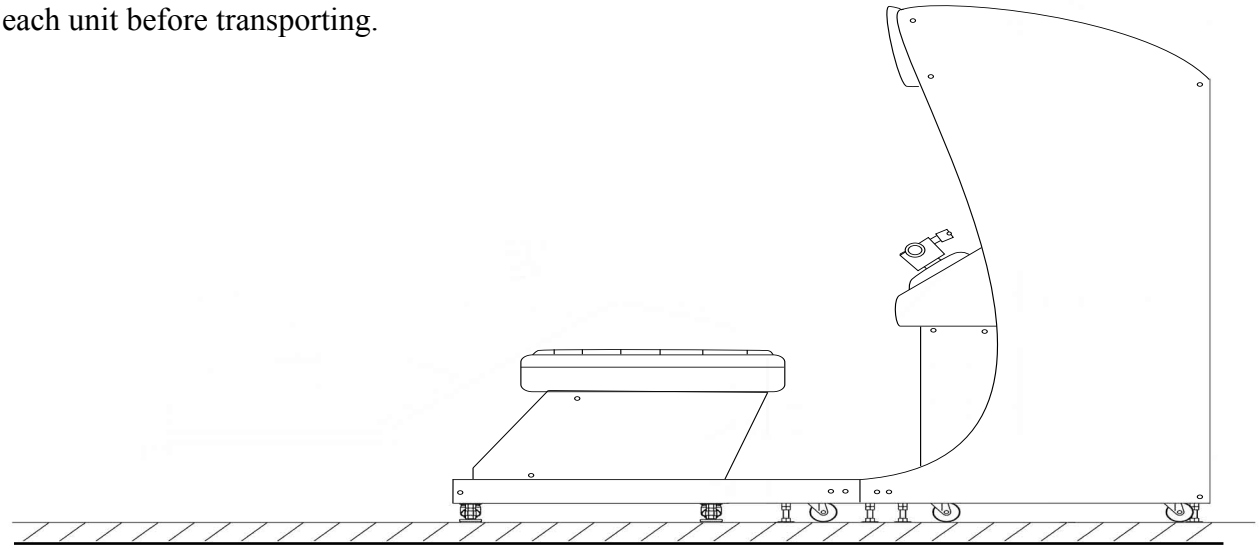


FIG. 7 b

8. CONTENTS OF GAME

The following explanations apply to the case the product is functioning satisfactory. Should there be any moves different from the following contents, some sort of faults may have occurred. Immediately look into the cause of the fault and eliminate the cause therefore to ensure satisfactory operation.

System Behavior in Advertising (Plying-for-Hire) Mode

While the power is connected to the system, in an advertising mode, the system opens an operation explanation screen or a ranking data screen. The view button flashes when the screen explains how to operate the view button.
Located on the left and right sides above the monitor, the speakers output audio information. You may set the ADVERTISE SOUND item to OFF on the GAME ASSIGNMENTS screen so that this audio output function is disabled in an advertising mode.
The start button flashes when the screen displays the PRESS START BUTTON message. This PRESS START BUTTON message appears in two cases; when the credit reaches a game-startable level in an advertising mode and shortly after opening the operation explanation screen.

FIG. 8 a External View of the Cabinet

www.seuservice.com

Features of the WaveRunner GP

It provides several marine scenes where a cruising course appearance varies from play to play. The WaveRunner GP game features:

- Effects of Stern Wave
  A stern wave is the wave produced on the wake of a boat. If your boat runs on the stern waves produced by another boat, it may jump unexpectedly, reduce its speed, or meet any other navigating difficulty. You must prevent your boat from running on the stern waves and navigate it with attention to where and how other boats are moving.

- Water-Level-Depending Jumps
  A large jump (or a group of small jumps) may appear on the course when a water level is lower (or higher). The jump that was submerged on your first round cruise may be above the water on your second round cruise. Therefore, you must navigate your boat differently and/or change a cruising path, from cruise to cruise, so that you can use an approaching jump.

How to Play

- Insert the coin(s).

- Make sure that the screen shows the PRESS START BUTTON message and that the start button flashes, and then climb onto the seat.

- Press the start button, and make sure that the operation explanation screen appears. (See the note 1 below.)

- Wait until the time is counted down to 0 (zero) on the operation explanation screen or alternately press the start button to exit the screen. In either case the COURSE SELECT screen appears.

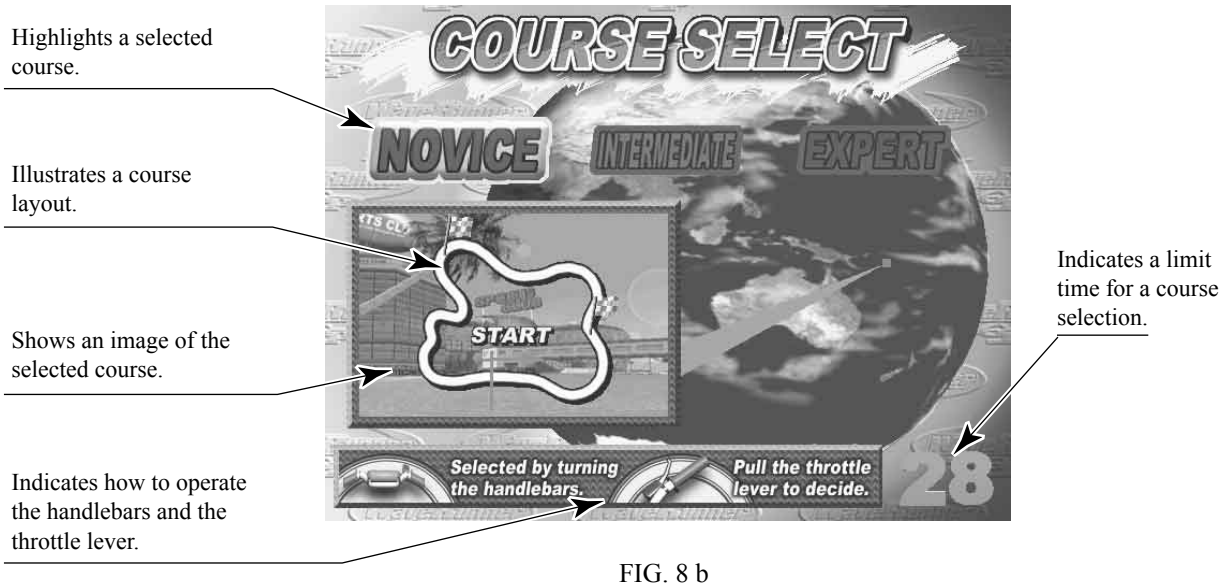


FIG. 8 b

- The system provides three courses: NOVICE, INTERMEDIATE, and EXPERT. These are displayed on the upper part of the screen. The selected course is highlighted. To migrate from one course to another, turn the handlebars leftwards or rightwards. To decide a course, squeeze the throttle lever. (See the note 2 below.)

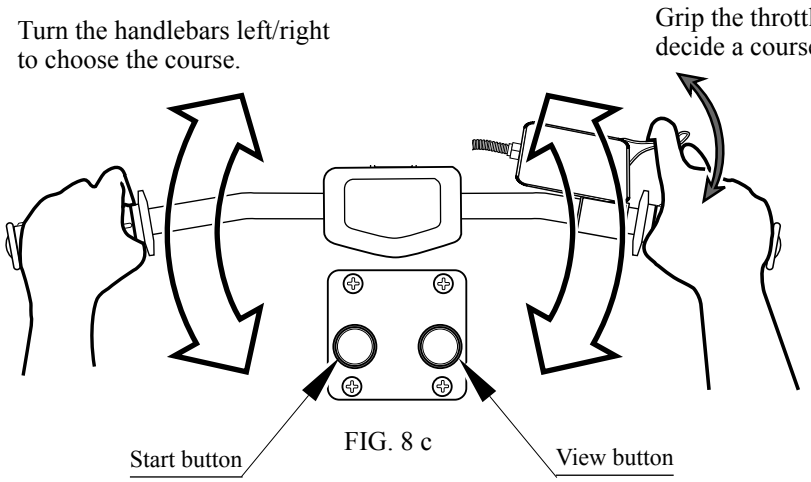


FIG. 8 c

- Wait until the time is counted down to 0 (zero) on the screen, and then the game starts. (See the note 3 below.)

- Make sure that the boat starts to move at this moment.

- The screen shows some information; your ranking position among the players (on its upper right part), a limit time (upper middle), your lap time, best lap time record, and best total time record (upper left), a tachometer and a speed meter (bottom right), and a speed-down gauge (bottom left). The speed-down gauge indicates a reduction of the cruising speed as a result of your boat running on the stern waves. It is dimmed when your boat is not running on the stern waves.

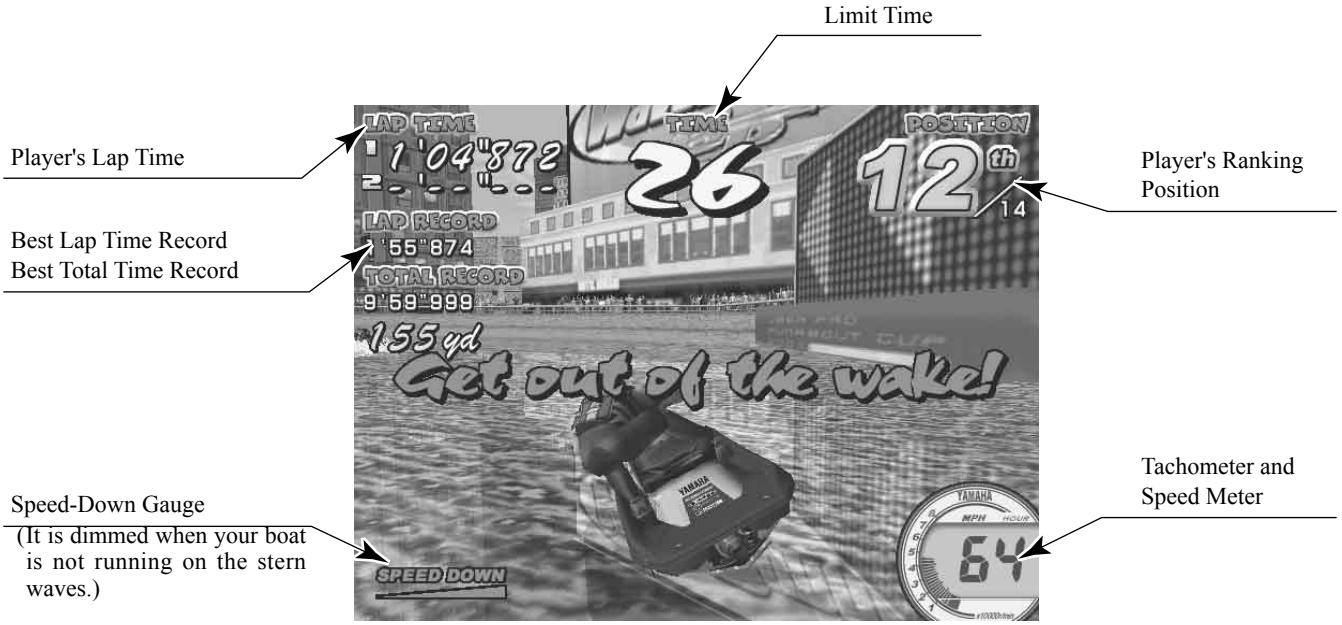
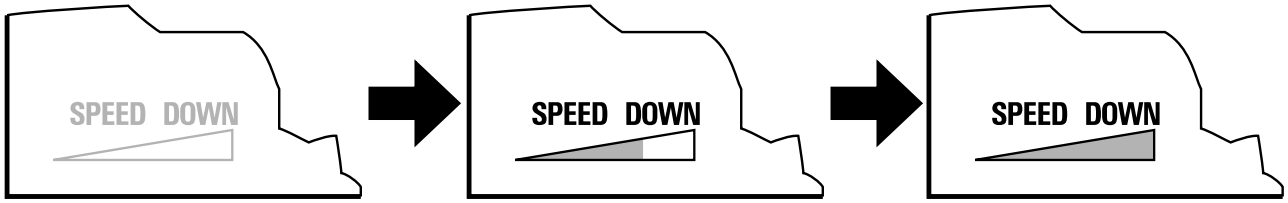


FIG. 8 d

www.seuservice.com

- When your boat runs on the stern waves, the speed-down gauge is undimmed and its triangle becomes filled with shade. If you keep your boat running on the stern waves, the triangle is shaded more and more.
  When the triangle is fully shaded, a warning message "Get out of the wake!" appears on the screen. If you make your boat off the stern waves at this moment, the speed-down gauge is again dimmed. If not, it is initialized to 0 (zero) and becomes filled with shade again.



Initially the gauge is dimmed.

When the boat runs on the stern waves, the gauge is undimmed and becomes filled with shade.

When the gauge is fully shaded, a warning message appears.

FIG 8 e

- When the game starts, the system starts counting down the limit time. If you successfully pass a checkpoint on the course within the limit time, the bonus time is added to the remaining time. If not, the game is over. (See the note 4 below.)

- For any course of NOVICE, INTERMEDIATE, or EXPERT. When you have successfully cruised around it two times, you reach the goal and the game is over. (See the note 5 below.)

- To navigate the boat while playing the game, use the throttle lever and the handlebars, and tilt up the boat by shifting your body. To increase a cruising speed, squeeze the throttle lever while to decrease un-squeeze. To turn the boat leftwards and rightwards, turn the handlebars leftwards and rightwards respectively. To quickly turn the boat, turn the handlebars and then tilt up the boat to a turning direction of the handlebars. Note that just tilting up the boat without turning the handlebars does not enable to turn the boat. Press the view button to toggle a viewpoint between a navigator's point and a rearward point.

- When reaching the goal, you can register your name if your lap time is good. Your registered name will be on a screen's ranking list in an advertising mode.

NOTES:

1) For an interactive communication play. Insert the one-play worth of coin(s) on the operation explanation screen and press the start button to enter the race. The system opens the entry screen where you wait until an opposition will enter the race by also inserting the one-play worth of coin(s) and pressing the start button. The entry screen closes and the operation explanation screen opens automatically, when a limit time is counted down to 0 (zero).

2) For an interactive communication play. When every player, after entering the race, has finished selecting a course, the racing course is decided by majority. In case of a tie, the course with a lower difficulty level is chosen.

3) Alternately, you can press the start button to decide a course.

4) For an interactive communication play. The bonus time is added to the remaining time when a leading player passes a checkpoint. The place of a player is indicated as 'place/the number of players' (e.g. 2/4 for a 4-player race, 1/2 for 2-player race). A player number, as 1P and 2P, is shown above the head of a playing character on the screen.

5) You cannot change the number of rounding cruises.

Outline of the Courses

Three cruising courses are provided as below. Note that they are different from each other not only in the difficulty level but also in the appearance and device.

- Novice Course
  This course gives the image of a tropical island against a blue sky where the hot sun grills white beaches. Generally, this novice course curves very gently.
  There are three checkpoints including a starting point.
  When your boat approaches a palm tree, the coconuts will fall down on your cruising path. Three dolphins may appear on the way and accompany your boat.
  The key part for reaching the goal is located at the end of the course that is sharply curved and enclosed with the cliffs.

- Intermediate Course
  This course gives the image of a thick rainforest with mysterious remains. Generally, this intermediate course is a very narrow river with rather many curves.
  There are four checkpoints including a starting point.
  The highlight of this course is a jump from the 50-meter giant waterfall.
  In the mangrove woodlands, tall mangroves block your boat. You must be careful not to let it hit against them.
  Big snakes and giant fishes produce an atmosphere of rainforest.
  The key parts for reaching the goal are the curves located short of the giant waterfall, in the mangrove woodlands, and in the cave at the end of the course. You must navigate your boat with careful attention to these curved spots.

- Expert Course
  This course gives the image of a waterfront where the surrounding skyscrapers are blazing in the evening darkness. This expert course features several combinations of a straight path and a sharp curve.
  There are four checkpoints including a starting point.
  All the scenes (the likes of the Brooklyn Bridge, the Statue of Liberty, and the Broadway with loud neon signs and large illumination bulletin boards) produce an atmosphere of big city.
  The key part for reaching the goal is the sharp curves located immediately after the straight paths.

9. EXPLANATION OF TEST AND DATA DISPLAY

By operating the switch unit, periodically perform the tests and data check. When installing the machine initially or collecting cash, or when the machine does not function correctly, perform checking in accordance with the explanations given in this section.
The following shows tests and modes that should be utilized as applicable.
NAOMI GAME BOARD is used for the product. The system of this game board allows another game to be played by replacing the ROM Board Case mounted on the NAOMI CASE. As such, the Test Mode of this system consists of the System Test Mode for the system to execute SELF-TEST, COIN ASSIGNMENTS, etc. used in common for the machines employing the NAOMI BOARD, and the Game Test Mode for the specific product to execute Input/Output test for the operation equipment, difficulty setting, etc.

IMPORTANT!

When the 2 or more machines are linked for communication play, be careful to enter the TEST mode. If one of the machines linked enters the TEST mode, all others display the NETWORK CHECK screen.

TABLE 10 EXPLANATION OF TEST MODE

ITEMS	DESCRIPTION
INSTALLATION OF MACHINE	When the machine is installed, perform the following: 1. Check to see that each setting is as per standard setting made at the time of shipment. 2. In the INPUT TEST mode, check such input devices as each SW, V.R., etc. 3. In the OUTPUT TEST mode, check such output devices as lamps, motors, etc. 4. In the self-test mode, check ICs on the IC Board.
MEMORY	Choose the board test item in the MENU mode to allow the self-test to be performed. In this test, PROGRAM RAMs, ROMs, and ICs on the IC Board are checked.
PERIODIC SERVICING	Periodically perform the following: 1. Self-Test 2. Ascertain each setting. 3. In the INPUT TEST mode, test the control device. 4. In the OUTPUT TEST mode, check such output devices as lamps, motors, etc.
CONTROL SYSTEM	1. In the INPUT TEST mode, check such input devices as each SW, V.R., etc. 2. Adjust or replace each SW and VR. 3. If the problem can not be solved yet, check the control's moves.
MONITOR	In the MONITOR ADJUSTMENT mode, check to see if the MONITOR adjustment is appropriately made.
IC BOARD	1. Self-Test 2. In the SOUND TEST mode, check the sound related ROMs.
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc.

www.seuservice.com

WARNING!

Do not touch places other than those specified. Touching places not specified can cause an electric shock or short circuit accident.

STOP

IMPORTANT!

Adjust to the optimum sound volume by considering the environmental requirements of the installation location.
If the COIN METER and the game board are electrically disconnected, game play is not possible.

SWITCH UNIT

Open the coin chute door, and the switch unit shown will appear. The functioning of each SW is as follows:

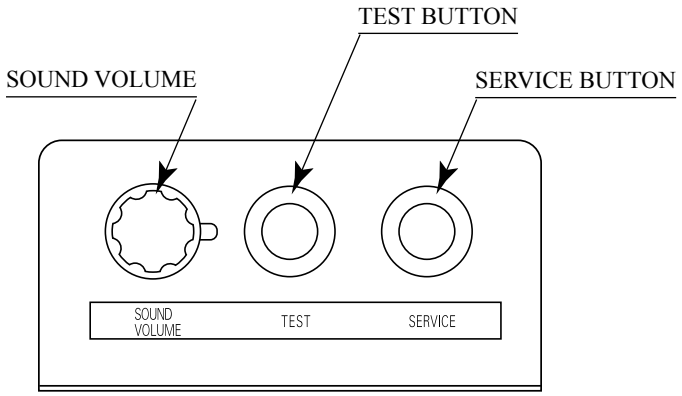


FIG. 9. 1 a SWITCH UNIT

TEST BUTTON (TEST) : For the handling of the test button, refer to the following pages.

SERVICE BUTTON (SERVICE) : Gives credits without registering on the coin meter.

SOUND VOLUME (SOUND VOLUME) : Adjust the Speaker Volume.

COIN METER

Open the Cashbox Door with the exclusively used key and the COIN METER will appear underneath the Cashbox.

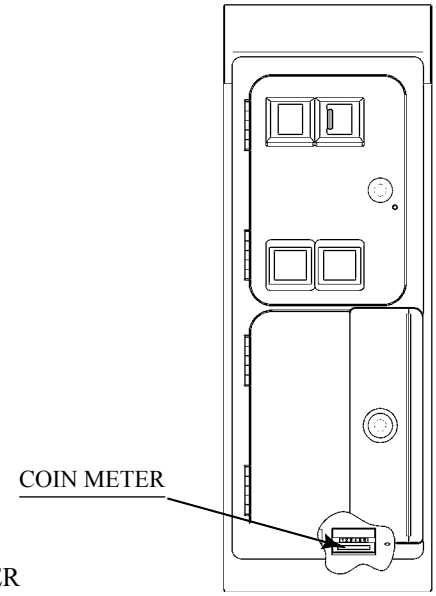


FIG. 9. 1 b COIN METER

The contents of settings changed in the TEST mode are stored when the test mode is finished from EXIT in the menu mode. If the power is turned off before the TEST mode is finished, the contents of setting change become ineffective.
Executing "BACKUP DATA CLEAR" in the SYSTEM TEST MODE does not clear the BOOKKEEPING data in the GAME TEST mode.
Entering the TEST mode clears fractional number of coins less than one credit and BONUS ADDER data.
Perform setting as per specified in this manual for operation. If setting not specified is performed for operation, proper function of this product may not be obtained.

In the SYSTEM TEST MODE, IC BD functioning can be checked, the monitor adjusted, and the coin setting performed.
Refer to NAOMI SERIVCE MANUAL for the details. Note that the setting of the following items need to be performed in accordance with the instruction given.

- CABINET TYPE: 1PLAYER(S)
- MONITOR TYPE: HORIZONTAL
- SERVICE TYPE: COMMON
- COIN CHUTE TYPE: COMMON

The SEQUENCE SETTING items of COIN ASSIGNMENTS are as follows.

- SEQUENCE SETTING
  SEQUENCE 1: Number of credits required for starting the game.
  SEQUENCE 2: Number of credits required for continuing the play.
  SEQUENCE 3 ~ 8: NOT USED

www.seuservice.com

CAUTION!

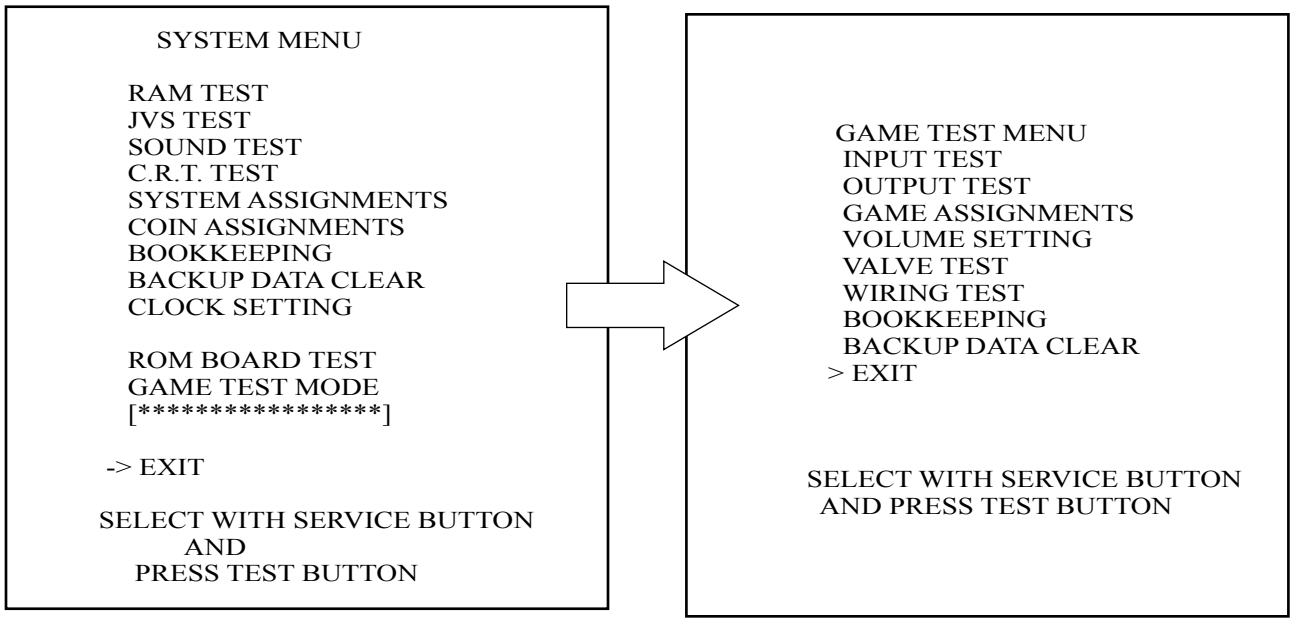
As soon as it enters the Game Test mode, the Ride starts moving. Before entering the Game Test Mode, be sure to keep away a person(s) from the Ride. Since the Ride moves momentarily, it may cause accidents.

STOP
IMPORTANT!

The new settings will not take effect until the Game Test Mode is exited. When you make change to the settings, exit the Game Test Mode by proper operation.
You must not attempt to demonstrate this game (for the selling purpose) with any other settings other than those specified in this document. Use of such settings may cause malfunctions or bad operation on the machine.

GAME TEST MENU

By selecting GAME TEST MODE from the System Test Menu Screen, the Game Test Mode Menu Screen is displayed as follows.



System Test Menu Screen

FIG. 9. 3 a Game Test Menu Screen

- Press the TEST Button to cause the following Test Menu to be displayed on the monitor.
- Press the SERVICE Button until the pointer ">" is moved to the desired item to make a selection.
- Bring the pointer ">" to the desired item and press the TEST Button to enter the selected item's test.
- In the Test mode, the Start button instead of Test button and the View button instead of Service button can be used. These, however, can not be used in the INPUT TEST.
- After the test is complete, move ">" to "EXIT" and press the TEST Button to return to the System Test Menu Screen.

INPUT TEST

When INPUT TEST is selected, the following screen appears on the monitor. The screen allows the status of each SW and the value of each V.R. of the cabinet to be viewed.
On this screen, periodically check the status of each switch & V.R.

```
          INPUT TEST


HANDLE BAR                    0H
ROLL                          0H
THROTTLE LEVER      FFH
PITCH                         0H

START                         OFF
VIEW                          OFF
SAFETY SENSOR                 OFF
SERVICE                       OFF
TEST                          OFF



PRESS TEST AND SERVICE BUTTON TO EXIT
```

- By pressing each switch, if the display on the right-hand side of the name of each switch changes to ON from OFF, the SW and the wiring connections are satisfactory.
- Simultaneously pressing the Service button and the Test button returns the Game Test Menu screen.

The standard values for adjusting each V. R. are as follows:
In this product, the item of VOLUME SETTING allows V. R. values except for PITCH to be set.

THROTTLE LEVER: e 0 H ± 9 (lever released)

Without a moving base you will not be able to do ROLL, PITCH, or SAFETY SENSOR.

www.seuservice.com

OUTPUT TEST

The OUTPUT TEST allows the function of each lamp to be checked.

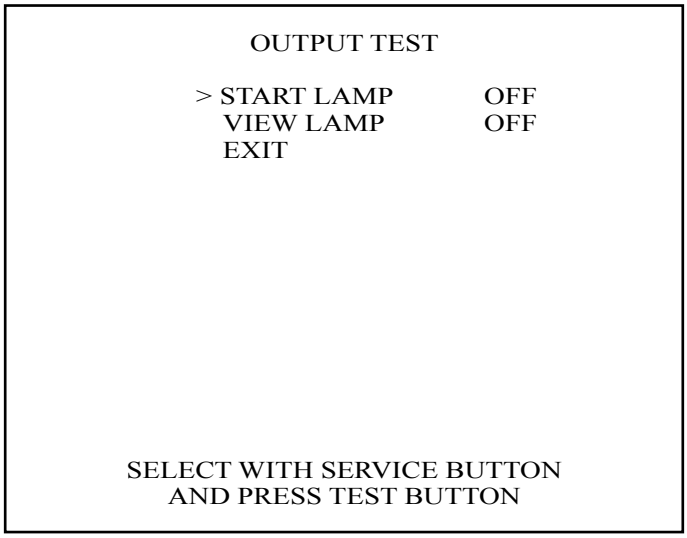


FIG. 9. 3 c OUTPUT TEST Screen

TEST PROCEDURE

1. Press the SERVICE Button to bring the arrow to the lamp item to be tested.
2. Pressing the TEST Button causes "ON" to be displayed and the corresponding lamp lights up. Pressing the TEST Button again causes "OFF" to be displayed and the lamp goes off.
3. Bring the arrow to EXIT and press the TEST Button to return to the Game Test Menu screen.

GAME ASSIGNMENTS

Selecting the GAME ASSIGNMENTS in the menu mode causes the present game setting to be displayed and also the game setting changes can be made. Each item displays the following content. If the COMMUNICATION MODE is set to NO LINK, the items HANDICAP and CABINET ID will not appear.

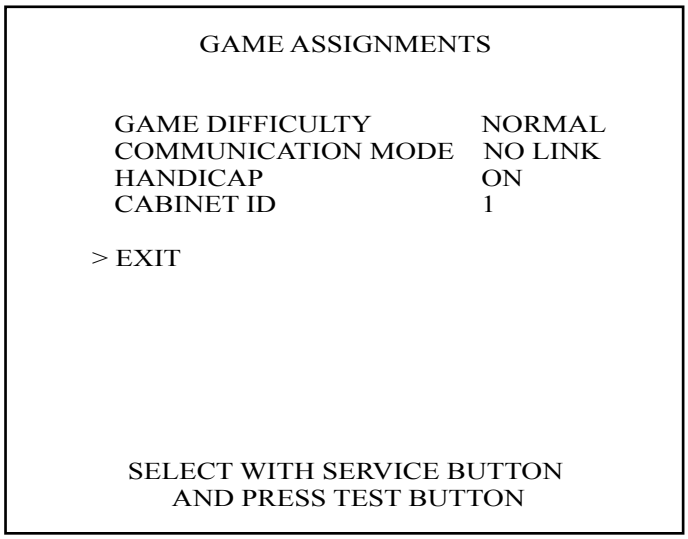


FIG. 9. 3 d GAME ASSIGNMENTS Screen

- GAME DIFFICULTY: The game difficulty can be differentiated by varying Time at the time of starting the race and Time at the time of passing the checkpoint. Choose one from among 3 categories, i.e., EASY, NORMAL and HARD.
- COMMUNICATION MODE: Set up whether the communication (interactive) play is enabled. There are 3 categories, i.e. MASTER (for one machine/player only), SLAVE (for communication play), and NO LINK (not for communication play).
- HANDICAP: In the communication vs. play, this sets whether correction should be made so that player boat in the second or lower positions increase the speed. Correction is used with ON and use of correction is cancelled with OFF.
- CABINET ID: When linked for communication play, allocate the numbers sequentially in order starting from the leftmost end.

For Communication play, refer to Section 20 "COMMUNICATION PLAY".

SETTING CHANGE PROCEDURE

1. Press the SERVICE Button to bring the arrow (>) to the desired setting change item.
2. Press the TEST Button to choose the desired setting item.
3. Bring the arrow to EXIT and press the TEST Button to return to the Game Test Menu screen.

www.seuservice.com

VOLUME SETTING

In this setting item, each V. R. value of the Handlebars, Roll, and Throttle can be set.

STOP
IMPORTANT!

When V. R. adjustment or replacement has been made, be sure to perform the setting in that particular V. R. value setting item.

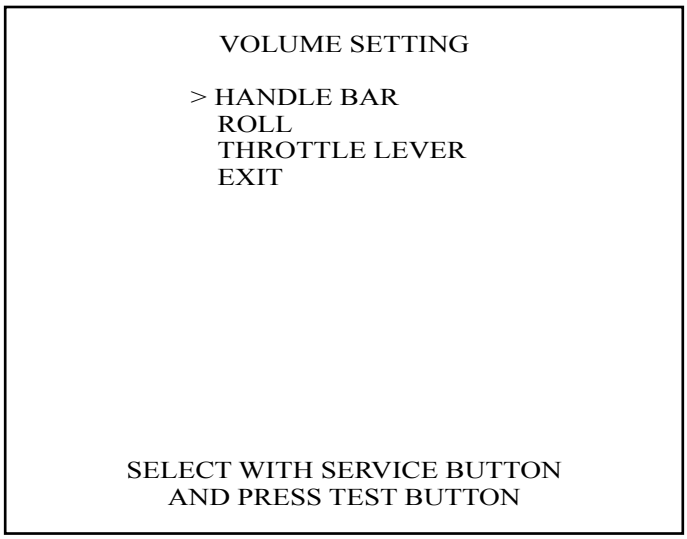


FIG. 9. 3 e a VOLUME SETTING Screen

(1) HANDLE BAR VOLUME SETTING

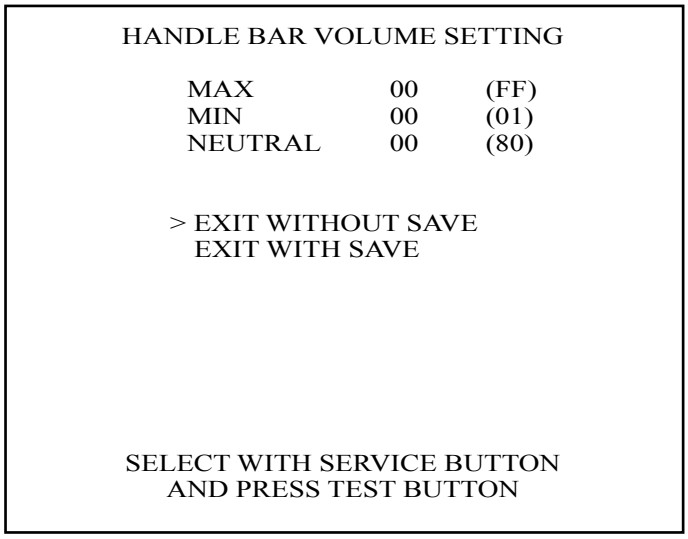
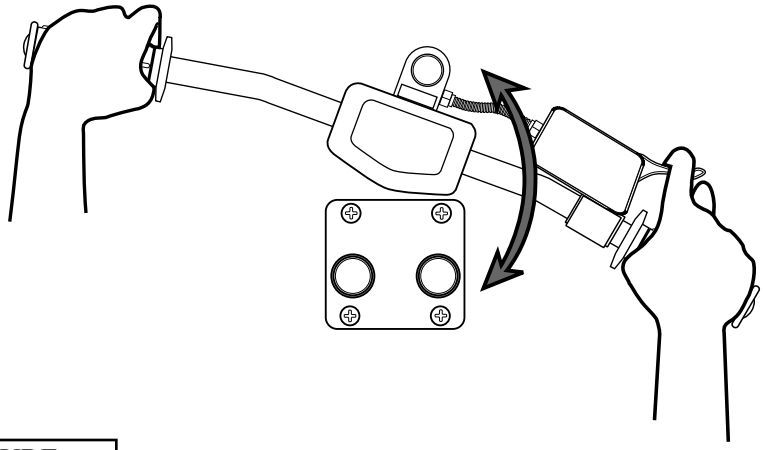


FIG. 9. 3 e b HANDLE BAR VOLUME SETTING Screen



SETTING PROCEDURE

1. In the V. R. setting menu screen, press the SERVICE Button to bring the arrow to HANDLE BAR.
2. Press the TEST Button to cause the HANDLE BAR VOLUME setting screen to appear.
3. Turn the Handlebars fully to the left/right and then release.
4. Press the SERVICE Button to bring the arrow to EXIT WITH SAVE.
5. Press the TEST Button to have the Volume Setting Menu screen return to the screen.
6. When setting other Volume values also, select the applicable select item.
7. Press the SERVICE Button to move the arrow to EXIT and press the TEST Button to return to the Game Test Menu screen.

(2) ROLL VOLUME SETTING

(1) PITCH VALVE & ETR CHECK

VALVE TEST

(2) ROLL VALVE & ETR CHECK

Being that this unit has no base. you will not be able to set the Roll Volume Setting, Pitch Valve & ETR Check, Valve Test, or Roll Valve & ETR Check.

(3) THROTTLE LEVER VOLUME SETTING

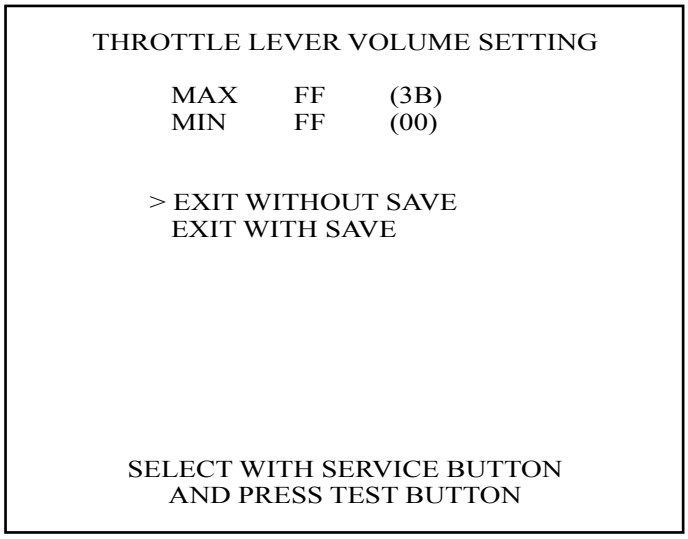
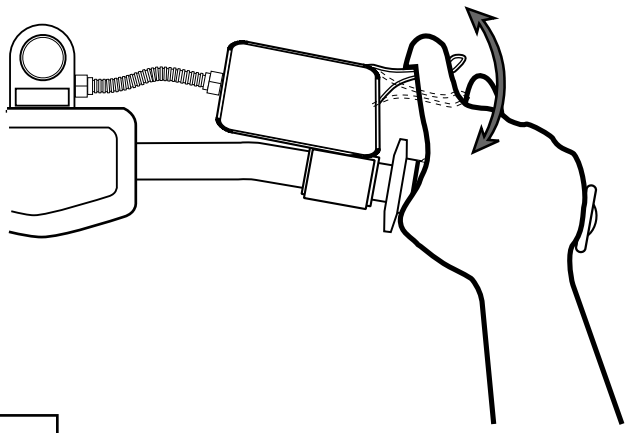


FIG. 9. 3 e d THROTTLE LEVER VOLUME SETTING Screen



SETTING PROCEDURE

1. In the Volume Setting Menu, press the SERVICE Button and bring the arrow to THROTTLE LEVER.
2. Press the TEST Button to have the THROTTLE VOLUME SETTING screen appear.
3. Fully grip the Throttle Lever and then release.
4. By pressing the SERVICE Button, bring the arrow to EXIT WITH SAVE.
5. Press the TEST Button to have the Volume Setting Menu return on the screen.
6. When setting other Volume values also, choose the applicable setting item.
7. Press the SERVICE Button to move the arrow to EXIT and press the TEST Button to return to the Game Test Menu screen.

www.seuservice.com

WIRING TEST

Selecting WIRING TEST allows the communication between GAME BD and DRIVE BD to be checked automatically. If the communication is satisfactorily conducted, "OK" is displayed and if any irregularity is found, "ERROR" will be displayed.

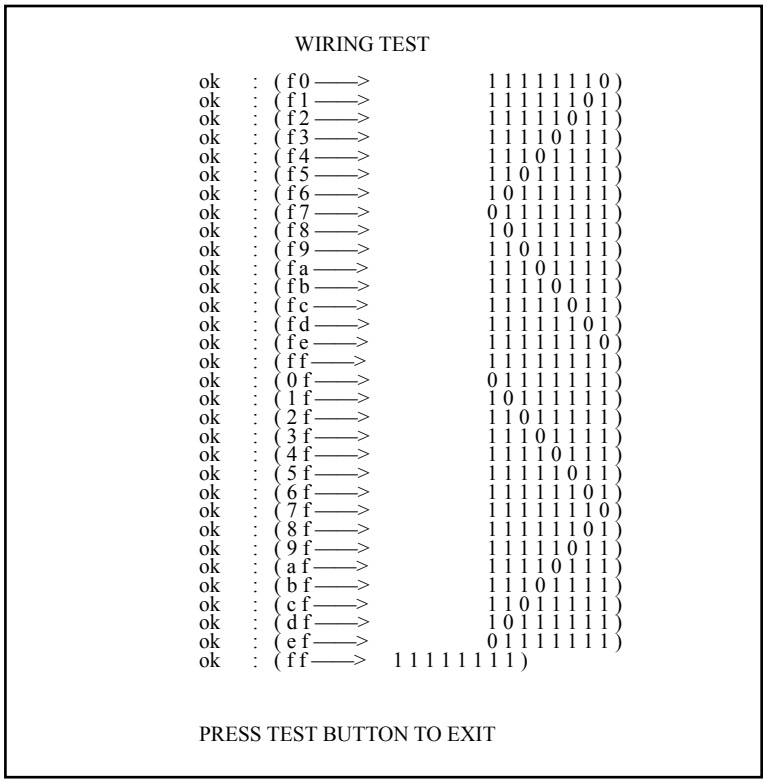


FIG. 9. 3 g WIRING TEST Screen

- After finishing the test, if the above Figure is displayed, it is satisfactory.
- After finishing the test, press the TEST Button to return to the Game Test Menu screen.

BOOKKEEPING

Selecting the BOOKKEEPING in the menu mode displays the bookkeeping data up to the present on the following 12 screens. Press the TEST Button again to proceed to the next page. When you press the TEST Button during the display of this mode, you return to the Game Test Menu.

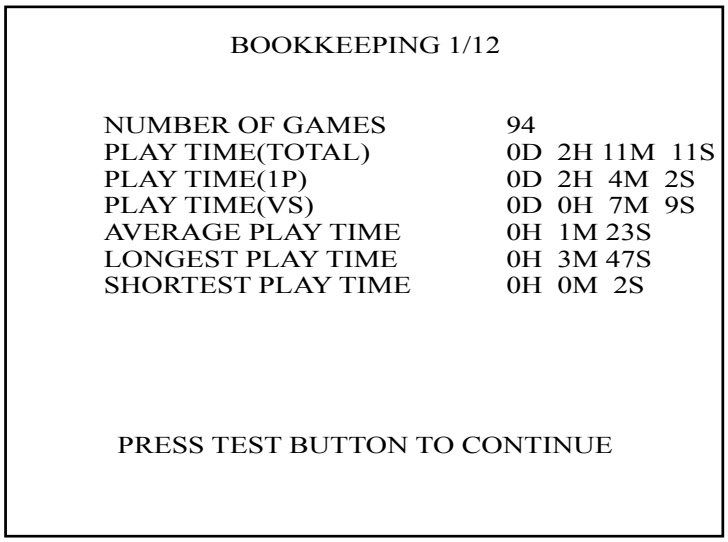

BOOKKEEPING 1/12
NUMBER OF GAMES 94
PLAY TIME(TOTAL) 0D 2H 11M 11S
PLAY TIME(1P) 0D 2H 4M 2S
PLAY TIME(VS) 0D 0H 7M 9S
AVERAGE PLAY TIME 0H 1M 23S
LONGEST PLAY TIME 0H 3M 47S
SHORTEST PLAY TIME 0H 0M 2S
PRESS TEST BUTTON TO CONTINUE

FIG. 9. 3 h a BOOKKEEPING (1/12) Screen

NUMBER OF GAMES:	Number of games played.
TOTAL TIME(TOTAL):	Total energized time.
PLAY TIME(1P):	Total playtime of one player game only.
PLAY TIME(VS):	Total playtime of communication game play.

(1) PLAY TIME HISTOGRAM

The time that players have been timeout is displayed in graph. It's a total of 2 screens.

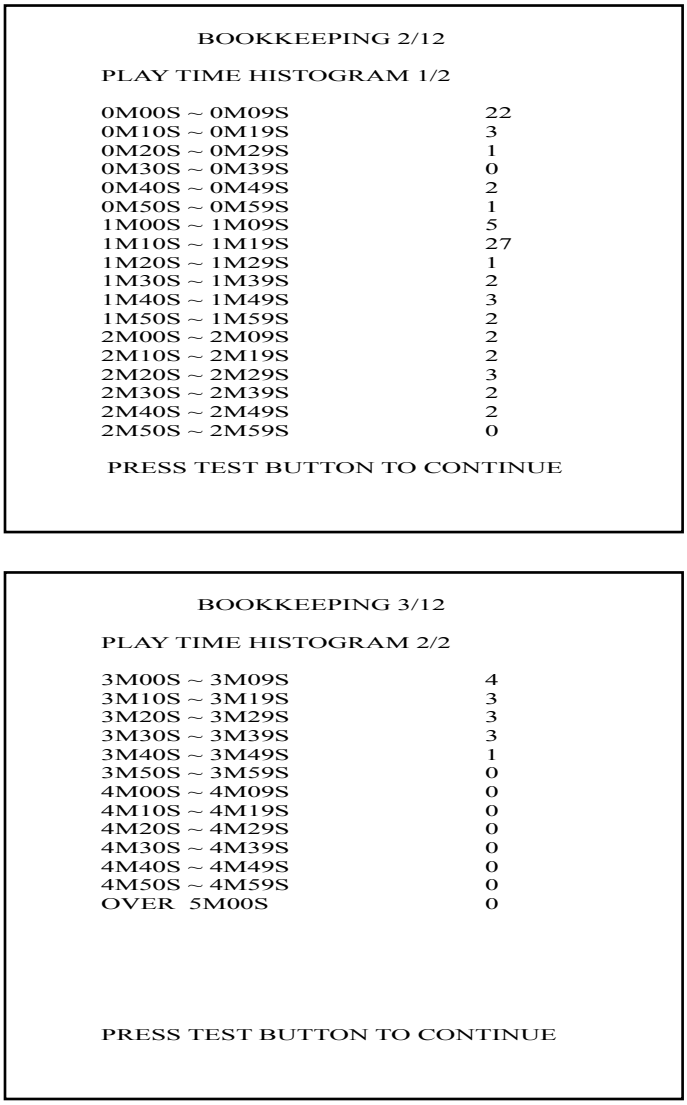


FIG. 9. 3 h b BOOKKEEPING (2 - 3/12) Screen

(2) CLEAR TIME HISTOGRAM

The clear time of the player, which has made a goal, is displayed in graph. Screens are two screens in NOVICE, INTERMEDIATE and EXPERT, respectively. So it's a total of 6 screens.

BOOKKEEPING 4/12

CLEAR TIME HISTOGRAM 1/2
NOVICE

0M00S ~ 0M09S	0
0M10S ~ 0M19S	0
0M20S ~ 0M29S	0
0M30S ~ 0M39S	0
0M40S ~ 0M49S	0
0M50S ~ 0M59S	0
1M00S ~ 1M09S	0
1M10S ~ 1M19S	0
1M20S ~ 1M29S	0
1M30S ~ 1M39S	0
1M40S ~ 1M49S	0
1M50S ~ 1M59S	0
2M00S ~ 2M09S	0
2M10S ~ 2M19S	0
2M20S ~ 2M29S	0
2M30S ~ 2M39S	0
2M40S ~ 2M49S	0
2M50S ~ 2M59S	0

PRESS TEST BUTTON TO CONTINUE

BOOKKEEPING 5/12

CLEAR TIME HISTOGRAM 2/2
NOVICE

3M00S ~ 3M09S	0
3M10S ~ 3M19S	0
3M20S ~ 3M29S	0
3M30S ~ 3M39S	2
3M40S ~ 3M49S	1
3M50S ~ 3M59S	0
4M00S ~ 4M09S	0
4M10S ~ 4M19S	0
4M20S ~ 4M29S	0
4M30S ~ 4M39S	0
4M40S ~ 4M49S	0
4M50S ~ 4M59S	0
OVER 5M00S	0

PRESS TEST BUTTON TO CONTINUE

BOOKKEEPING 6/12

CLEAR TIME HISTOGRAM 1/2
INTERMEDIATE

0M00S ~ 0M09S	0
0M10S ~ 0M19S	0
0M20S ~ 0M29S	0
0M30S ~ 0M39S	0
0M40S ~ 0M49S	0
0M50S ~ 0M59S	0
1M00S ~ 1M09S	0
1M10S ~ 1M19S	0
1M20S ~ 1M29S	0
1M30S ~ 1M39S	0
1M40S ~ 1M49S	0
1M50S ~ 1M59S	0
2M00S ~ 2M09S	0
2M10S ~ 2M19S	0
2M20S ~ 2M29S	0
2M30S ~ 2M39S	0
2M40S ~ 2M49S	0
2M50S ~ 2M59S	0

PRESS TEST BUTTON TO CONTINUE

BOOKKEEPING 7/12

CLEAR TIME HISTOGRAM 2/2
INTERMEDIATE

3M00S ~ 3M09S	0
3M10S ~ 3M19S	0
3M20S ~ 3M29S	0
3M30S ~ 3M39S	0
3M40S ~ 3M49S	0
3M50S ~ 3M59S	0
4M00S ~ 4M09S	0
4M10S ~ 4M19S	0
4M20S ~ 4M29S	0
4M30S ~ 4M39S	0
4M40S ~ 4M49S	0
4M50S ~ 4M59S	0
OVER 5M00S	0

PRESS TEST BUTTON TO CONTINUE

BOOKKEEPING 8/12

CLEAR TIME HISTOGRAM 1/2
EXPERT

0M00S ~ 0M09S	0
0M10S ~ 0M19S	0
0M20S ~ 0M29S	0
0M30S ~ 0M39S	0
0M40S ~ 0M49S	0
0M50S ~ 0M59S	0
1M00S ~ 1M09S	0
1M10S ~ 1M19S	0
1M20S ~ 1M29S	0
1M30S ~ 1M39S	0
1M40S ~ 1M49S	0
1M50S ~ 1M59S	0
2M00S ~ 2M09S	0
2M10S ~ 2M19S	0
2M20S ~ 2M29S	0
2M30S ~ 2M39S	0
2M40S ~ 2M49S	0
2M50S ~ 2M59S	0

PRESS TEST BUTTON TO CONTINUE

BOOKKEEPING 9/12

CLEAR TIME HISTOGRAM 2/2
EXPERT

3M00S ~ 3M09S	0
3M10S ~ 3M19S	0
3M20S ~ 3M29S	0
3M30S ~ 3M39S	0
3M40S ~ 3M49S	0
3M50S ~ 3M59S	0
4M00S ~ 4M09S	0
4M10S ~ 4M19S	0
4M20S ~ 4M29S	0
4M30S ~ 4M39S	0
4M40S ~ 4M49S	0
4M50S ~ 4M59S	0
OVER 5M00S	0

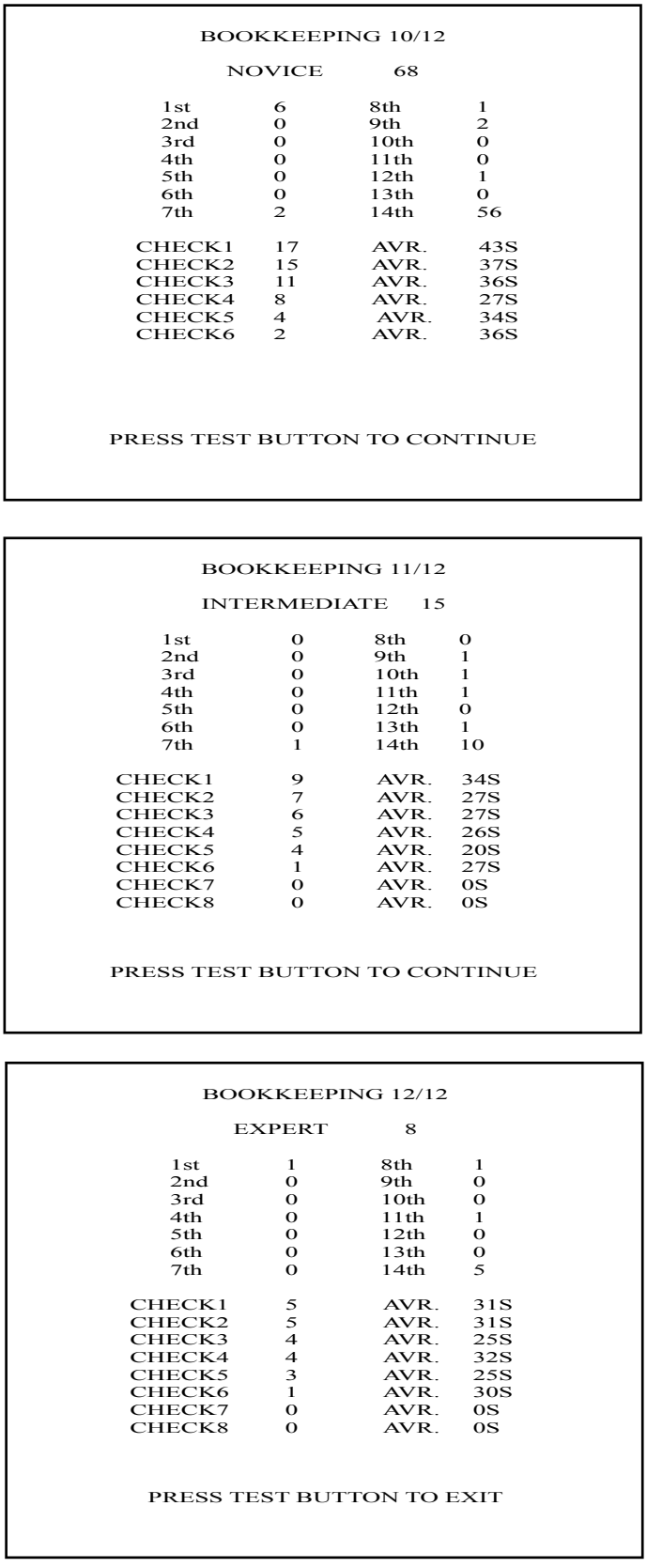
PRESS TEST BUTTON TO CONTINUE

FIG. 9. 3 h c BOOKKEEPING (4 - 9/12) Screen

www.seuservice.com

(3) Detailed data of each course

Allows for checking the detailed data of each course; NOVICE, INTERMEDIATE and EXPERT. It's a total of 3 screens on each course 1 screen.



2nd line of the screen:
Indicates the course name and the total playing time.

1st - 14th:
Indicates the ranking at the play end time. (It's not whether the game was cleared or not.)

CHECK 1-6 or 8:
Indicates the number of players, which arrived at each check-point.

AVR:
Indicates the average time of each checkpoint section.

FIG. 9. 3 h d BOOKKEEPING (10 - 12/12) Screen

BACKUP DATA CLEAR

Clears the contents of BOOKKEEPING. When clearing the data, use the SERVICE Button to bring the arrow to "YES (CLEAR)" and press the TEST Button. When clearing is finished, "COMPLETED" is displayed. Press the TEST Button again to return to the Game Test Menu screen. Bring the arrow to "NO (CANCEL)" and press the TEST Button to have the Game Test Menu screen return on the screen without clearing the data. Note that this operation does not affect the contents of the game setting.

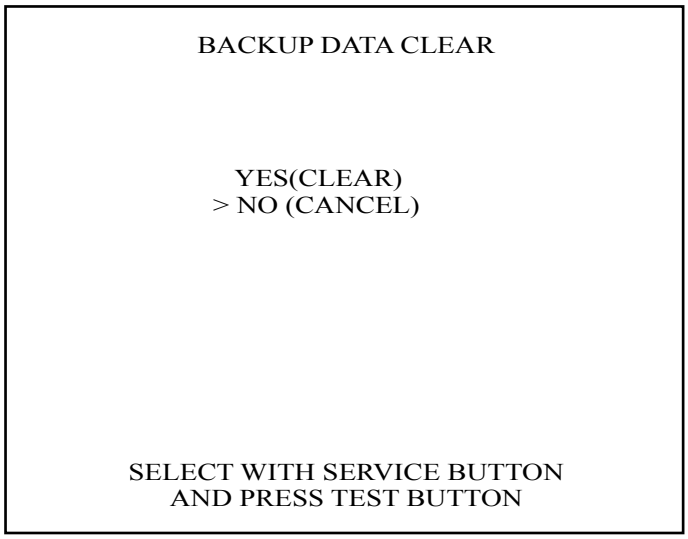


FIG. 9. 3 h c BACKUP DATA CLEAR Screen

10. COIN SELECTOR

HANDLING THE COIN JAM

If the coin is not rejected when the REJECT button is pressed, open the coin chute door and open the selector gate. After removing the jammed coin, put a normal coin in and check to see that the selector correctly functions.

CLEANING THE COIN SELECTOR

STOP
IMPORTANT!

Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
Never apply machine oil, etc. to the Coin Selector.
After cleaning the Coin Selector, insert a regular coin in the normal working status and ensure that the Selector correctly functions.

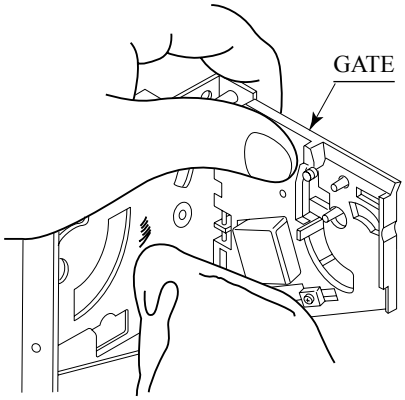


FIG. 13 a

The coin selector should be cleaned once every 3 months. When cleaning, follow the procedure below:

1. Turn the power for the machine OFF. Open the coin chute door.
2. Remove the coin selector from the coin chute door.
3. Open the gate and dust off by using a soft brush (made of wool, etc.).
4. Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
5. Remove the CRADLE.
   When removing the retaining ring (E ring), be very careful so as not to bend the rotary shaft.
6. Remove stain from the rotary shaft and shaft receiving portions by wiping off with a soft cloth, etc.
7. After wiping off as per (5) above, further apply a dry cloth, etc. to cause the coin selector to dry completely.

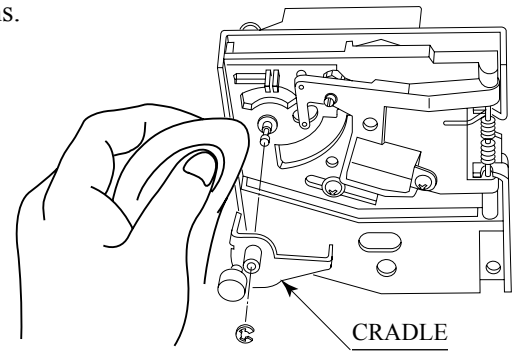


FIG. 13 b

COIN INSERTION TEST

Once every month, when performing the Coin SW Test, simultaneously check the following:

- ☐ Does the Coin Meter count satisfactorily?
- ☐ Does the coin drop into the Cashbox correctly?
- ☐ Is the coin rejected when inserted while keeping the Reject Button pressed down?

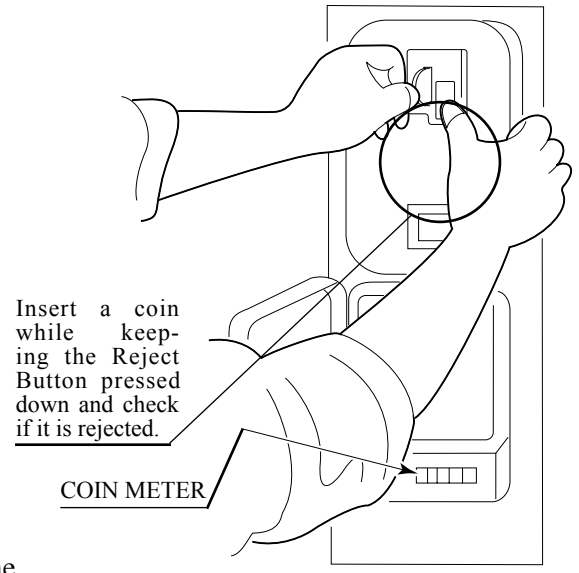


FIG. 13 c

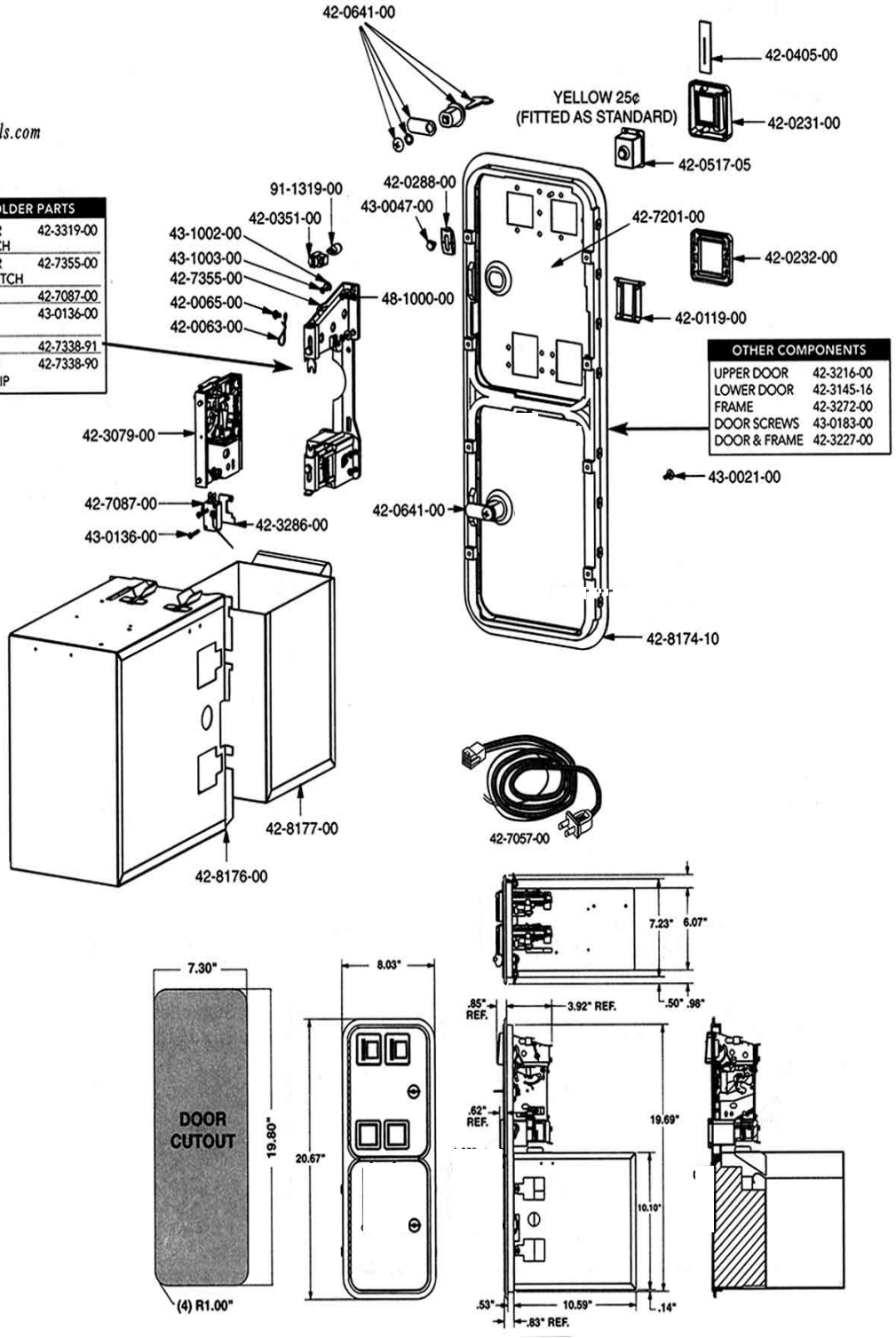
COIN DOOR

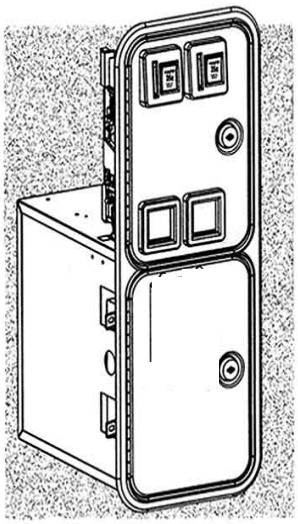
Tom Happ
tom.happ@happcontrols.com
Happ Controls
106 Garlisch Drive
Elk Grove, IL. 60007
Ph. 847-593-6161 ext. 107
Fx. 847-956-2091

Visit our website http://www.happcontrols.com

MECH HOLDER PARTS	
MECH HOLDER W/COIN SWITCH	42-3319-00
MECH HOLDER W/O COIN SWITCH	42-7355-00
COIN SWITCH	42-7087-00
SCREW FOR COIN SWITCH	43-0136-00
METAL CLIP	42-7338-91
THUMBSCREW FOR METAL CLIP	42-7338-90

OTHER COMPONENTS	
UPPER DOOR	42-3216-00
LOWER DOOR	42-3145-16
FRAME	42-3272-00
DOOR SCREWS	43-0183-00
DOOR & FRAME	42-3227-00





11. MONITOR

15-1 CAUTIONS AND WARNINGS CONCERNING THE SAFETY FOR HANDLING THE MONITORS

Before handling the monitors, be sure to read the following explanations and comply with the caution/warning instructions given below. Note that the caution/warning symbol marks and letters are used in the instructions.

WARNING!

Indicates that handling the monitors erroneously by disregarding this warning may cause a potentially hazardous situation, which could result in death or serious injury.

CAUTION!

Indicates that handling the monitors by disregarding this caution may cause a potentially hazardous situation, which could result in personal injury and or material damage.

Indicates that access to a specific part of the equipment is forbidden.

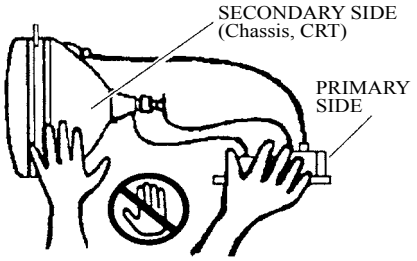
Indicates the instruction to disconnect a power connector or to unplug.

WARNING!

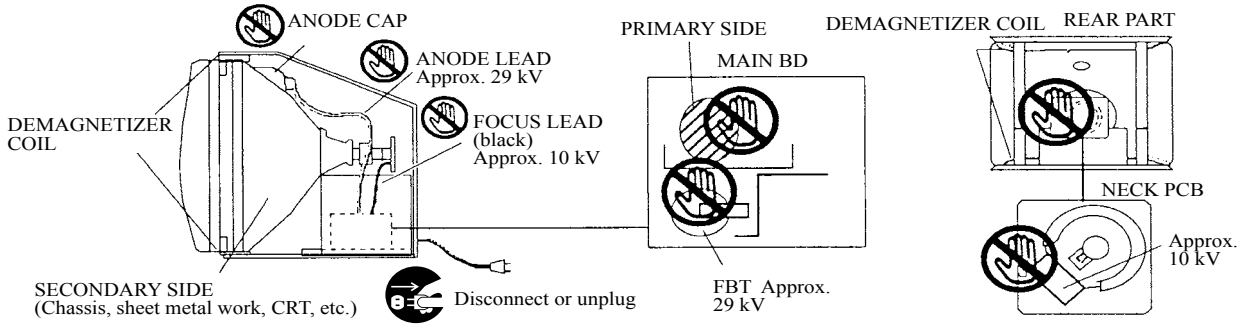
- When performing such work as installing and removing the monitor, inserting and disconnecting the external connectors to and from monitor interior and the monitor, be sure to disconnect the power connector (plug) before starting the work. Proceeding the work without following this instruction can cause electric shock or malfunctioning.
- Using the monitor by converting it without obtaining a prior permission is not allowed. SEGA shall not be liable for any malfunctioning and accident caused by said conversion.

WARNING!

- Primary side and Secondary side
  The monitor's circuit which is divided into the Primary side and Secondary side, is electrically isolated. Do not touch the primary side, or do not touch both the primary side and the secondary side simultaneously. Failing to observe the instruction can cause electric shock and this is very dangerous. When making monitor adjustments, use a non-conductive driver and make adjustment without touching any part other than the Adjustment V. R. and knob. Also, be sure not to cause a short-circuit to the Primary side and Secondary side. If short-circuited, it can cause electric shock or malfunctioning, which is very dangerous.



- High-tension Voltage
  Some of the parts inside monitor are subject to high-tension voltage in excess of 20,000 volts and very dangerous. Therefore, do not touch the monitor interior. Should soldering & paper wastes, etc. be mixed in the monitor interior, turn the power off so as not to cause malfunctioning or fire hazard.



- Connecting the CRT and PCB
  For combining the CRT and PCB, use the specified part No. to maintain the status of adjustments made at the factory. The anode of the CRT itself will be accumulatively charged as time elapses, generating high-tension voltage which is very dangerous. The monitor should be used with the Chassis, CRT and PCB assembled. When repair, etc. is required at the time of malfunctioning, be sure to send it in an "as is assembled" condition. If these are disassembled, what's charged to said high tension voltage can be discharged, causing a very hazardous situation. Therefore, under no circumstances should it be disassembled.

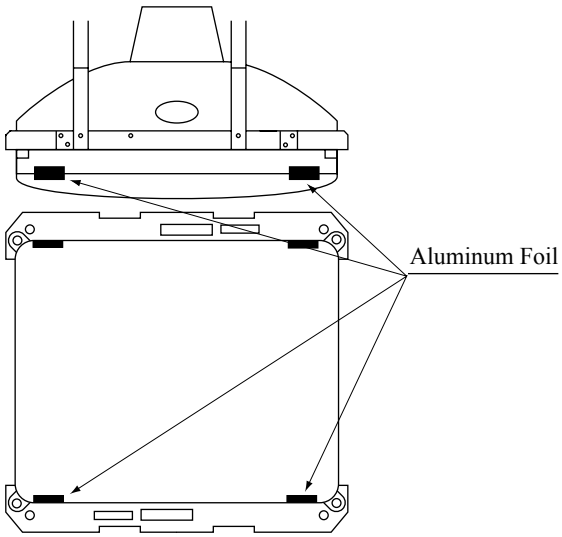
CAUTION!

- Static Electricity
  Touching the CRT surface sometimes causes you to slightly feel electricity. This is because the CRT surfaces are subject to static and will not adversely affect the human body.
- Installation and removal
  Ensure that the Magnetizer Coil, FBT (Fly-Back Transformer), Anode Lead and Focus Lead are not positioned close to the sheet metal work's sharp edges, etc. and avoid damaging the insulated portions so as not to cause electric shock and malfunctioning. (For the name of parts, refer to the above Figures).

CAUTION

For the purpose of static prevention, special coating is applied to the CRT face of this product. To protect the coating, pay attention to the following points. Damaging the coating film can cause electric shock to the customers.

- Do not apply or rub with a hard item (a rod with pointed edge, pen, etc.) to or on the CRT surfaces.
- Avoid applying stickers, seals, etc. on the CRT face.
- Do not remove aluminum foils from the CRT corners. Removing the aluminum foils can cause static prevention effects to be lowered.



15-2 CLEANING THE CRT SURFACES

CAUTION

Static preventive coating is applied to the CRT surfaces. When cleaning, pay attention to the following points. Peeling off of static preventive coat can cause electric shock.

- Remove smears by using a dry, soft cloth (flannels, etc.). Do not use a coarse gauze, etc.
- For smear removing solvent, alcohol (ethanol) is recommended. When using chemical detergent, be sure to follow instructions below:
  - Dilute chemical detergent with water and dip a soft cloth in and then thoroughly wring it to wipe smears off.
  - Do not use a chemical detergent containing an abradant, powder or bleaching agent.
  - Do not use alkaline chemical detergents such as "glass cleaner" available on the market or solvents such as thinner, etc.
- Do not rub or scratch the CRT face with hard items such as brushes, scrub brush, etc.

Clean the CRT surfaces once a week. When cleaning, pay attention to the above caution so that the antistatic coating will not come off.

12. PERIODIC INSPECTION TABLE

The Air Compressor employed in this product drives the Ride during game. The items listed below require periodic check and maintenance to retain the performance of this machine and to ensure safe business operation.

Be sure to check once a year to see if Power Cords are damaged, the plug is securely inserted, dust is accumulated between the Socket Outlet and the Power Plug, etc. Using the product with dust as is accumulated can cause a fire or electric shock.
Periodically once a year, request the place of contact herein stated or the Distributor, etc. where the product was purchased from, as regards the interior cleaning. Using the product with dust as is accumulated in the interior without cleaning can cause a fire or accident. Note that cleaning the interior parts can be performed on a pay-basis.

TABLE 16

ITEMS	DESCRIPTION	PERIOD
CABINET	Check LEG ADJUSTER adjustments.	Daily
HANDLE MECHA	Check VOLUME VALUE.	Monthly
	Greasing of GEAR and bearing.	Tri-monthly
COIN CHUTE TOWER	Check COIN SWes.	Monthly
	Coin insertion test.	Monthly
	Cleaning of COIN SELECTOR.	Tri-monthly
POWER SUPPLY PLUG	Inspection and cleaning	Annually
INTERIOR	Cleaning	
CABINET	Cleaning	As necessary.

CLEANING THE CABINET SURFACES

When the cabinet surfaces are badly soiled, remove stains with a soft cloth dipped in water or diluted (with water) chemical detergent and squeezed dry. To avoid damaging surface finish, do not use such solvents as thinner, benzine, etc. other than ethyl alcohol, or abrasives, bleaching agent and chemical dustcloth.

13. TROUBLESHOOTING

17 - 1 TROUBLESHOOTING

In order to prevent electric shock and short circuit, be sure to turn power off before performing work.
Be careful so as not to damage wirings. Damaged wiring can cause electric shock or short circuit.
After removing the cause of the functioning of the Circuit Protector, reinstate the Circuit Protector. Depending on the cause of the functioning, using the Circuit Protector as is without removing the cause can cause generation of heat and fire hazard.

In case a problem occurs, first check wiring connector connections.

TABLE 17 a

PROBLEMS	CAUSE	COUNTERMEASURES
When the main SW is turned ON, the machine is not activated.	The power is not ON.	Firmly insert the plug into the outlet.
	Incorrect power source/voltage.	Make sure that the power supply/voltage are correct.
	The CIRCUIT PROTECTOR functioned due to momentary overcurrent.	After eliminating the cause of overload, have the Circuit Protector of the AC Unit restored.
	The fuse of the connect board was blown out due to momentary overcurrent.	After eliminating the cause of overload, replace the specified rating fuse (514-5036-7000, FUSE 6.4 ø X 30 7000mA 125V).
Sound is not emitted.	Sound volume adjustment is not correct.	Adjust the SWITCH UNIT's sound adjustment volume control.
	Malfunctioning BD. and Amp.	Perform SOUND TEST. (NAOMI Service Manual)

www.seuservice.com

TABLE 17 b

PROBLEMS	CAUSE	COUNTERMEASURES
During game, the Ride does not turn when the Handlebars are turned.	Deviation of Handle Volume.	Adjust the Volume value in the test mode.
	Malfunctioning of Handle Volume.	Replace the Volume.
When gripping the Throttle Lever, the Ride does not advance.	Deviation of Throttle Volume.	Adjust Volume values in the Test mode.
	Malfunctioning of Throttle Volume.	Replace the Volume.
Communication play not possible.	Communication cable connection is incorrect.	Connect the communication cables correctly.
	Communication settings are wrong.	Correct the settings.
Fluorescent lamp doesn't light up.	Connector connection fault.	Check connector connections to the Marquee .
	Fluorescent lamp need replacement.	Replace the fluorescent lamp.

This work should be performed by the Location's Maintenance Man or Serviceman. Performing work by non-technical personnel can cause accidents.
Should any errors other than listed by this manual or by NAOMI Service Manual occur, contact where the product was purchased from or an office described in this manual. Failing to comply with this instruction can cause accidents.

This product displays the error on the screen if the faulty is detected. If an error is displayed, be sure to take action against it according to the appropriate cause and countermeasures listed below.
It may be displayed the error other than listed by this manual or by NAOMI Service Manual. In that case, contact where the product was purchased from or an office described in this manual without operating it selfishly.

☐DISPLAY○	NETWORK ERROR: NO MASTER SITE
☐CAUSE○	No MASTER setting in Communication Mode.
☐COUNTERMEASURES○	Perform the Communication Mode setting in the Game Assignments. Set one of the machines to MASTER and all others to SLAVE.

☐DISPLAY○	NETWORK ERROR: DUPLICATE MASTER SITE
☐CAUSE○	MASTER setting is duplicated in Communication Mode.
☐COUNTERMEASURES○	Perform the Communication Mode setting in the Game Assignments. Set one of the machines to MASTER and all others to SLAVE.

☐DISPLAY○	NETWORK ERROR: NO SLAVE SITE
☐CAUSE○	No SLAVE setting in Communication Mode.
☐COUNTERMEASURES○	Perform the Communication Mode setting in the Game Assignments. Set one of the machines to MASTER and all others to SLAVE.

☐DISPLAY○	NETWORK ERROR: TOO MANY NODES SITE
☐CAUSE○	Too many machines are connected.
☐COUNTERMEASURES○	Up to 4 machines can be connected to allow to enjoy communication play.

☐DISPLAY○	NETWORK ERROR: DUPLICATE CABINET ID
☐CAUSE○	The number of Cabinet ID is duplicated in Communication Mode.
☐COUNTERMEASURES○	Change the number of Cabinet ID for every seat in the Game Assignments.

☐DISPLAY○	DRIVE BD ERROR: E2H
☐CAUSE○	Connection to Eliminator board is bad.
☐COUNTERMEASURES○	Check Connections from Eliminator board to Drive Board.

www.seuservice.com

☐ DISPLAY ○ DRIVE BD ERROR: E3H
☐ CAUSE ○ Connection to Eliminator board is bad.
☐ COUNTERMEASURES ○ Check Connections from Eliminator board to Drive Board.

☐ DISPLAY ○ DRIVE BD ERROR: E4H
☐ CAUSE ○ Connection to Eliminator board is bad.
☐ COUNTERMEASURES ○ Check Connections from Eliminator board to Drive Board.

☐ DISPLAY ○ DRIVE BD ERROR: E7H
☐ CAUSE ○ Connection to Eliminator board is bad.
☐ COUNTERMEASURES ○ Check Connections from Eliminator board to Drive Board

☐ DISPLAY ○ NO DRIVE BOARD
☐ CAUSE ○ Connection to Eliminator board is bad.
☐ COUNTERMEASURES ○ Check Connections from Eliminator board to Drive Board.

14. GAME BOARD

In order to prevent electric shock and short circuit hazards, be sure to turn power off before performing work.
Be careful so as not to damage wirings. Damaged wiring can cause fire, electric shock and short circuit hazards.
Do not expose the Game BD, etc. without a good reason. Failure to observe this can cause electric shock hazard or malfunctioning.
To perform work safely and securely, be sure to use 2 or more workers.

The electronic parts on the IC Board could be damaged due to human body's static electricity. Before performing IC Board related work, be sure to discharge physically accumulated statics by touching grounded metallic surfaces, etc.

Put the Game Board in the Carton Box (an accessory) together with the Shield Case when requesting for the replacement or repair. Transporting the Game Board in an undesignated status for replacement/repair is unacceptable.
In this manual, how to remove the Game Board is explained for convenience. However, this work should be performed by SEGA SERVICEMAN.

www.seuservice.com

STOP
IMPORTANT!

Ensure that the DIP SW setting is performed as designated. Failure to observe this may cause functioning not suitable for the actual operation, or malfunctioning.

ASSY CASE NAO WRG USA (840-0064D-06) : USA

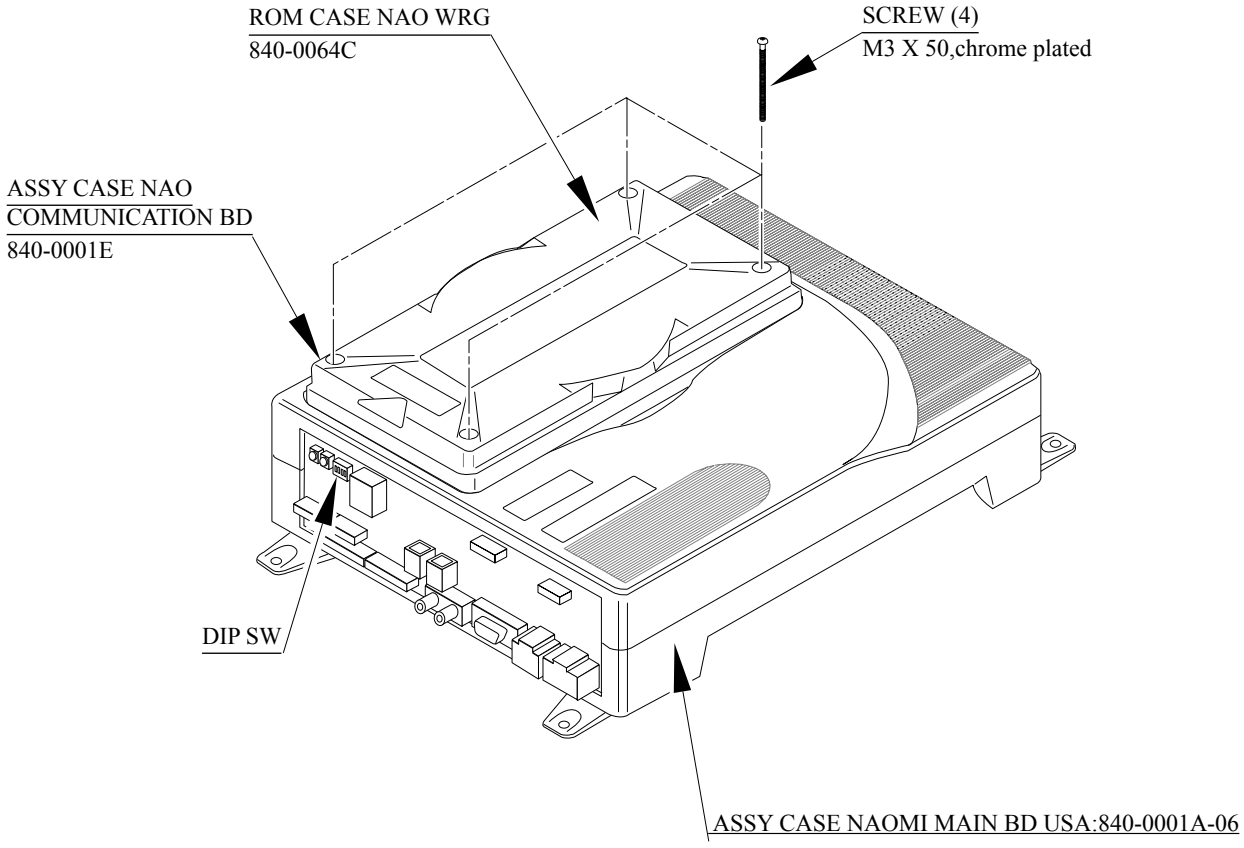


FIG. 18. 2 a

DIP SW SETTING

In this product, set all of the DIP Switches to OFF.

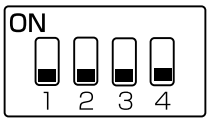


FIG. 18. 2 b

15. DESIGN RELATED PARTS

999-1872
Marquee

999-1873
Decal Cab Side Left WRGP
999-1874
Decal Cab Side Right WRGP

999-1879
Decal Accelerator WRGP

999-1877
Decal Inst Left WRGP

999-1878
Decal Inst Right WRGP

999-1875
Decal Cab Side Left WRGP
999-1876
Decal Cab Side Right WRGP

20. COMMUNICATION PLAY

For this game, up to 4 machines can be connected to allow up to 4 players to play simultaneously. In this instance, connecting the communication cable and setting for the communication play are required.

20 - 1 INSTALLATION PRECAUTIONS

Before starting to work, ensure that the Power SW is OFF. Failure to observe this can cause electric shock or short circuit.
Use care so as not to damage wirings. Damaged wiring can cause electric shock or short circuit.
Do not touch undesignated places. Touching places not designated can cause electric shock or short circuit.
This work should be performed by the Location's Maintenance Man or Serviceman. Performing work by non-technical personnel can cause electric shock hazard.
When linking a number of machines, be sure to supply sufficient power for the corresponding number of machines. Be sure to secure per machine current as stated in this manual. Failure to observe this can cause a fire and an electric shock accident.
Due to the length of the communication cable, the distance in between the machines is limited. However, to avoid accidents, be sure to secure space in excess of 2 ft between the machines.
To perform work safely and avoid serious accident such as the cabinet's falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.

To perform work safely, be sure to secure the space corresponding to number of machines to be linked. Failure to observe this can cause accident.

The optic fiber cable is used for the communication linkage.
Excessive bending may damage the communication cable. Be very careful in this regard.

Since 2 or more machines are to be linked, sufficient power corresponding to the number of machines used need to be supplied. Note that as a standard, the per machine capacity should be 15A for the 100 ~ 120V area, and 8A for the 220 ~ 240V area.

Note: Actual Unit does not look like Image.

DISTANCE BETWEEN MACHINES

Be sure to secure space in excess of 2ft between machines.

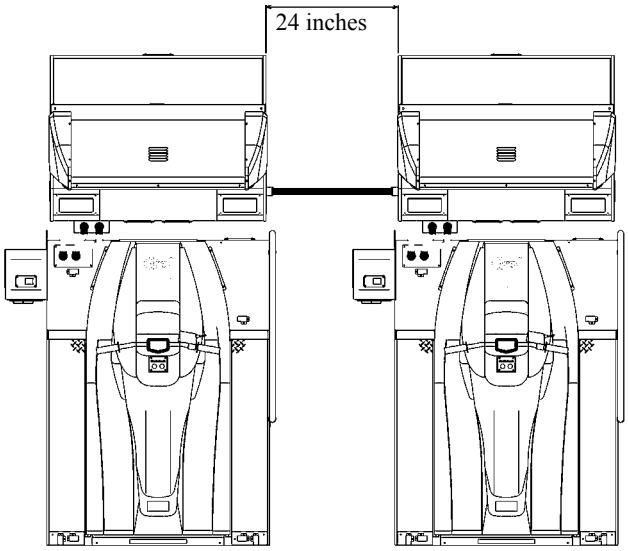


FIG. 20. 1

20 - 2 CONNECTING THE COMMUNICATION CABLE

To enable the game machines to serve in a communication play, you must interconnect their game boards with the communication cables (optical fiber cables).

(1) Connect the communication cable to each game board. Pass the communication cable through the round hole on the side of the Front Cabinet and connect to the game board connectors. A connecting method varies depending on the number of the interconnected game machines (see Fig. 20.2b).
Always connect the red connector to RX and the black connector to TX, and thereby make a loop of the communication cable.

Note: Photo Differs from actual Unit.

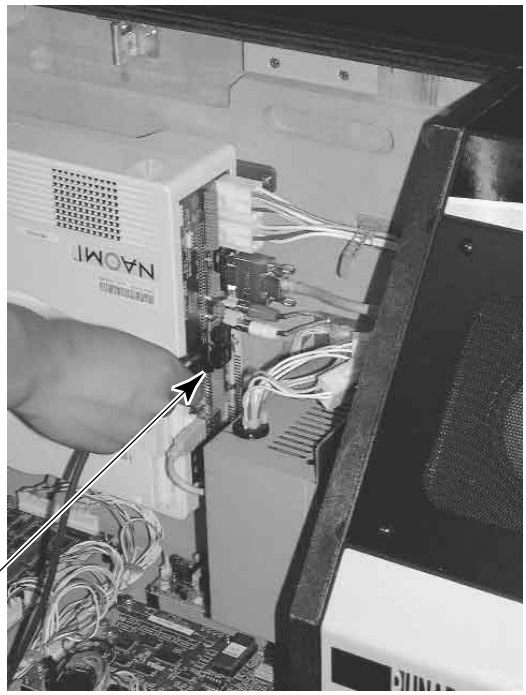
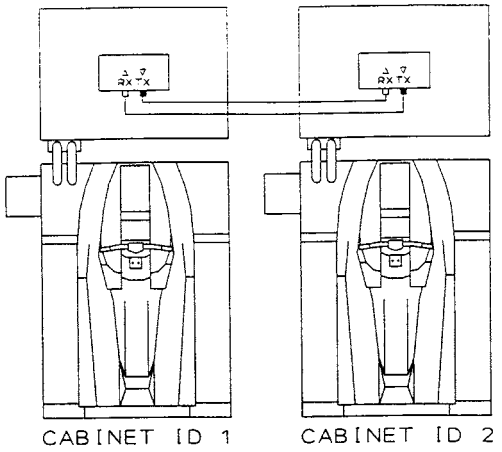
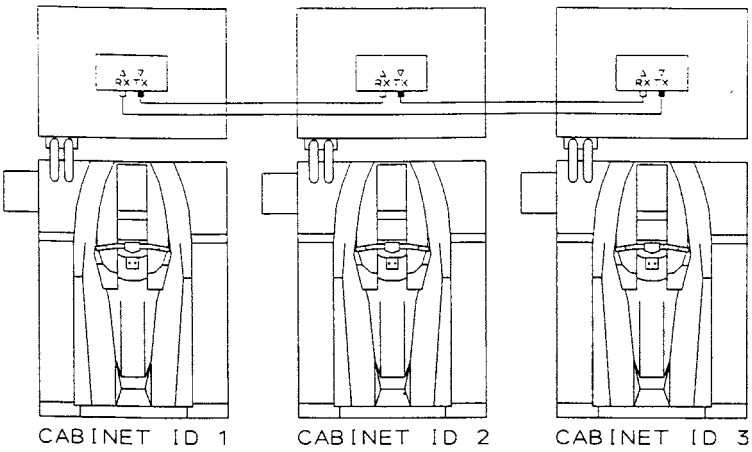


PHOTO 20. 2 c

2P LINK



3P LINK



4P LINK

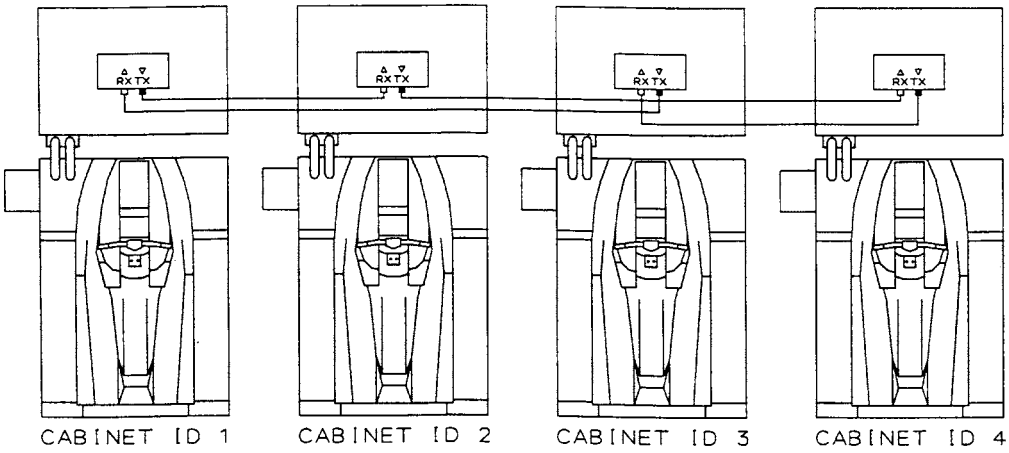


FIG. 20. 2 b Connecting method of the communication cable

Note: Actual Units differ from Image.

⑨ Arrange the interconnected game machines. Keep a space between the game machines as wide as possible.

⑩ Make the adjusters of all the game machines come into contact with the floor.

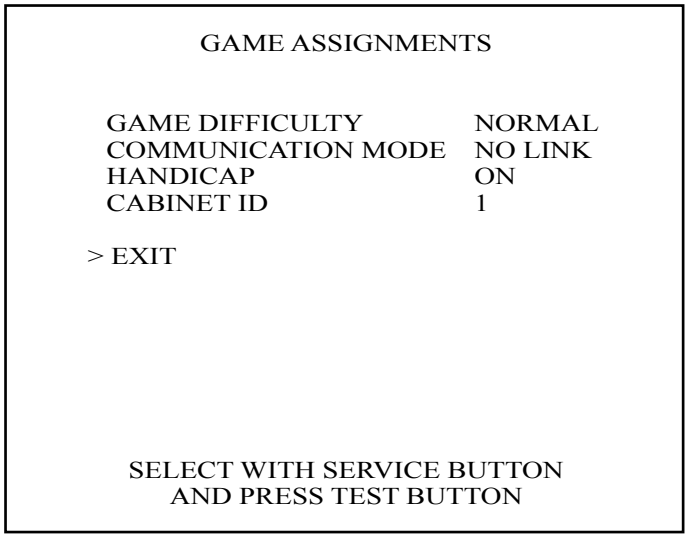
⑪ Connect the power cords and the earth wires.

20 - 3 SETTING FOR COMMUNICATION PLAY

Change the game setting for each seat in manner so as to meet communication play. If the setting is not correct, communication play cannot be played.

SETTING FOR COMMUNICATION PLAY

1. Turn the linked machines' power on.
2. Cause all of the machines to enter the test mode (see Section 9).
3. Select the GAME ASSIGNMENTS (see 9-3 d).



If it is set to SLAVE, GAME DIFFICULTY and HANDICAP are disappeared on the screen.

FIG. 20. 3 GAME ASSIGNMENTS Screen

4. Perform the COMMUNICATION MODE setting in the GAME ASSIGNMENTS screen. Set one of the machines to MASTER and all others to SLAVE.
5. Perform the CABINET ID setting in the GAME ASSIGNMENTS screen. Set the machines to 1, 2, 3 and 4 sequentially in order starting from the leftmost machine facing the screen. Set every number correctly without duplicating.
6. Cause all of the machines to exit from the test mode by selecting EXIT in the System Test Menu.
7. Exiting from the test mode causes the unit to perform the network check automatically. The Network Check screen appears on the screen.
8. When finishing the network check successfully, the Advertise Screen appears. Normally the network check finishes within several 10 seconds. If the screen does not proceed from the Network Check screen, some sorts of errors such as the error of the setup, the error of cable connection, and malfunctioning the communication cables, etc. can be considered.

www.seuservice.com

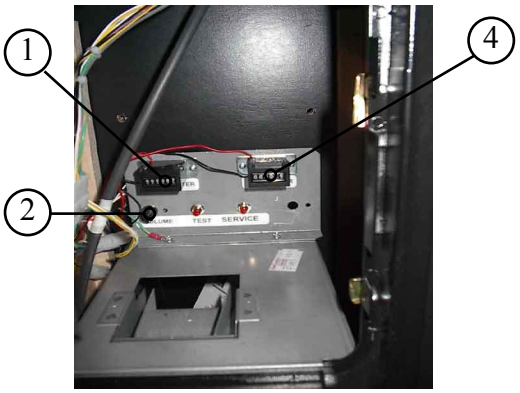
20 - 4 CAUTIONS TO BE HEEDED DURING COMMUNICATION PLAY

During communication play, if communication is interrupted due to some cause, the game is discontinued and the Network Check screen is displayed.
If one of the linked machines enters the Test Mode, all others display the Network Check screen.
Even if it has set to the communication play, you can setup a different charge for every machine.
A wrong charge setup may cause the problems of income and outgo.

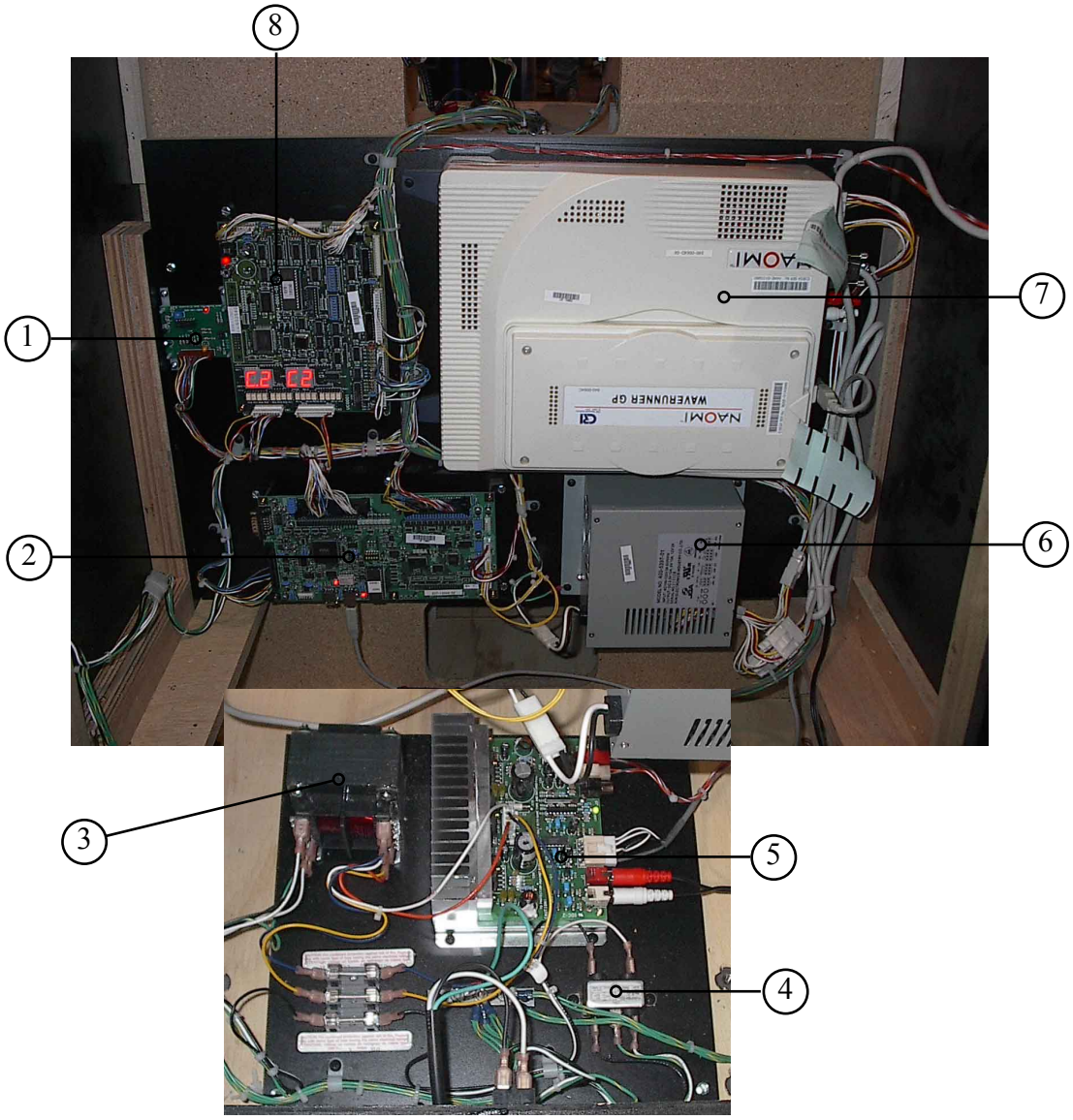
Machine's operation when linked for communication play alters comparing to that of when independently operated. Be careful of this point.
When any game machine is in a Test Mode, a Network Check screen appears on the other game machines interconnected for a communication play. While a guest is using any one of the interconnected game machines, therefore, do not activate a Test Mode even on the unused game machine.

17. Parts

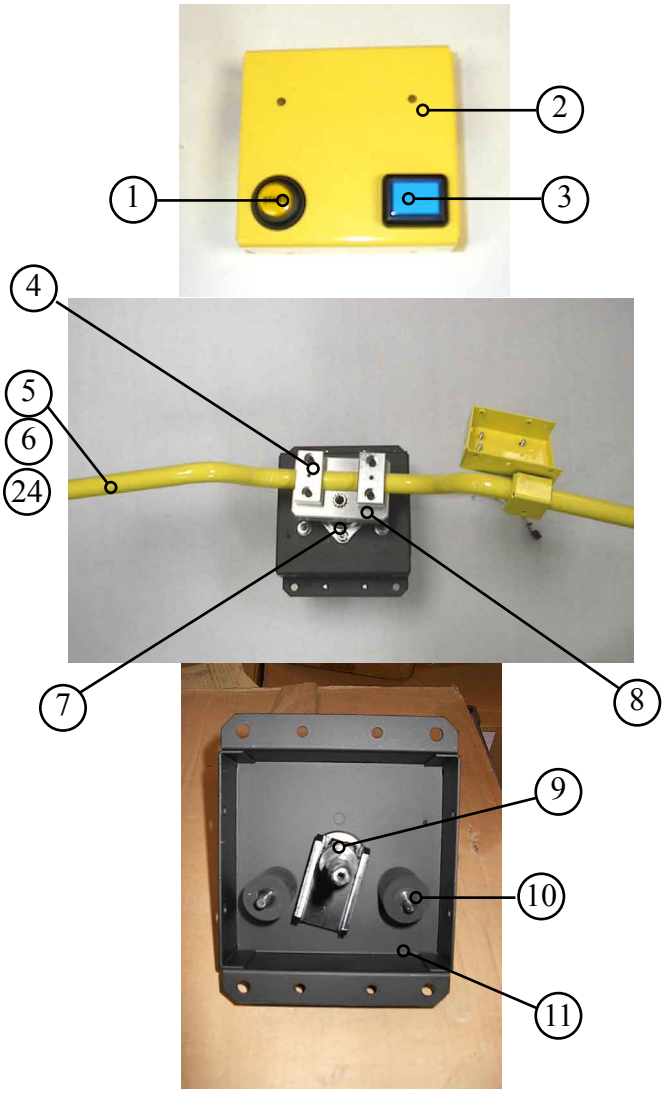
Item #	Part #	Description	Notes
1	999-1868	Marquee Plex Clear	Goes over Syrine Marquee
2	999-1859	Speaker 25W RMS 50W Peak 4Ohm	GR# A056-354-000
3	999-1867	Monitor Bezel	
4	999-1871	Seat Small Hard Blue	
5	999-1863	Floor Mat Back Section	
6	999-1864	Floor Mat Front L or R	
7	999-1866	Control Panel Cover Yellow	
8	Local Purchase	18” CoolWhite Fluorescent 15W	
9	999-0167	Leg Leveler	
10	999-1900	Rear Wheels	

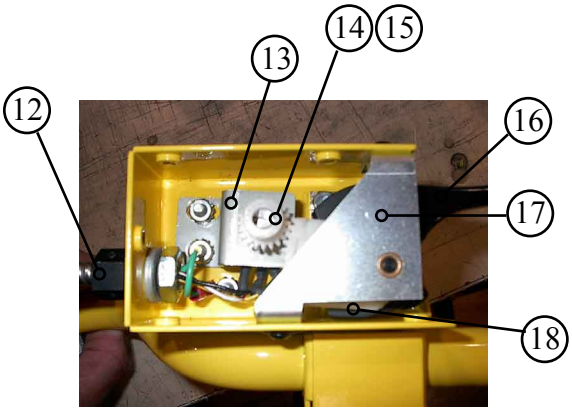


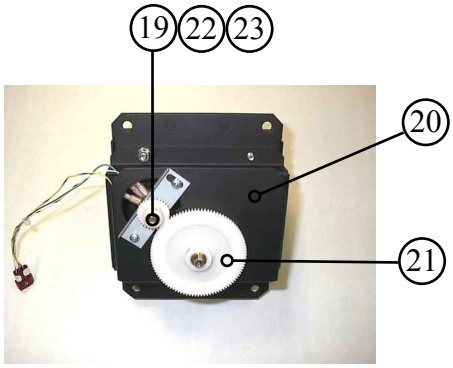
Item #	Part #	Description	Notes
1	999-1889	Coin Meter	0053-013-102
2	999-1860	1/4in shaft 450-2023 Mouser	
4	999-1889	Coin Meter	0053-013-102



Item #	Part #	Description	Notes
1	998-0195	Eliminator Board	
2	838-12801	Drive BD WaveRunner	
3	998-0190	Transformer 36 VCT @ 3.6A/A41-130-36	
4	998-0194	Line filter GA Yun Pen YK06T1	
5	838-13616	Audio Power Amp 2CH	
6	400-5397-01	SW REGU for JVS VA	
7	840-0064D-06	Assy Case Nao Wrg Std USA	
8	837-13844-02	I/O Control BD 2 W/O 232C Dog	







Item #	Part#	Description	Notes
1	999-1861	Start Button	
2	999-1880	Handle Cover	
3	999-1862	View Button	
4	999-1881	Handle Bar Bracket	
5	999-1882	Handle Bar	
6	999-1883	Handle Grips	
7	999-1884	Handle Shaft Bearing	
9	999-1885	Handle Shaft	
10	999-1886	Handle Stopper	
11	999-1887	Handle Assembly Body	
12	998-0196	Accel Harness	
13	999-1889	Accel Pot Bracket	
14	999-1892	Accel Pot Gear	
15	999-1896	Accel Pot	
16	999-1898	Accel Lever	
17	999-1890	Accel Lever Bracket	
18	999-1895	Accel Spring	
19	999-1891	Steering Pot Bracket	
20	999-1888	Handle Assembly Body Lower	
21	999-1893	Handle Shaft Gear	
22	999-1897	Steering Pot	
23	999-1894	Steering Pot Gear	

22. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follow:

A	PINK
B	SKY BLUE
C	BROWN
D	PURPLE
E	LIGHT GREEN

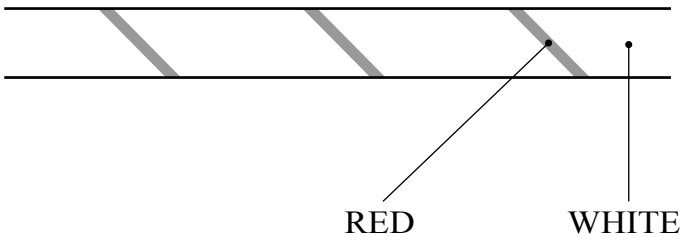
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

1	RED
2	BLUE
3	YELLOW
4	GREEN
5	WHITE
7	ORANGE
8	BLACK
9	GRAY

If the right-hand side numeral of the code is 0, then the wire will be of a single color shown by the left-hand side numeral (see the above).

Note 1: If the right-hand side alphanumeric is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

<Example> 51. . . . . .WHITE / RED



Note 2: The character following the wire color code indicates the size of the wire.

U:	AWG16
K:	AWG18
L:	AWG20
None:	AWG22

Notes:

Warranty

Your new Sega Product is covered for a period of 90 days from the date of shipment. This certifies that the Printed Circuit Boards, Power Supplies and Monitor are to be free of defects in workmanship or materials under normal operating conditions. This also certifies that all Interactive Control Assemblies are to be free from defects in workmanship and materials under normal operating conditions. No other product in this machine is hereby covered.

Sellers sole liability in the event a warranted part described above fails shall be, at its option, to replace or repair the defective part during the warranty period. For Warranty claims, contact your Sega Distributor.

Should the Seller determine, by inspection that the product was caused by Accident, Misuse, Neglect, Alteration, Improper Repair, Installation or Testing, the warranty offered will be null and void.

Under no circumstances is the Seller responsible for any loss of profits, loss of use, or other damages.

This shall be the exclusive written Warranty of the original purchaser expressed in lieu of all other warranties expressed or implied. Under no circumstance shall it extend beyond the period of time listed above.

SEGA AMUSEMENTS USA, INC.

45133 Industrial Drive
Fremont, CA 94538
(415) 701-6580 phone
(415) 701-6594 fax